

Sequence Listing

<110> Ashkenazi, Avi J.
 Baker, Kevin P.
 Botstein, David
 Desnoyers, Luc
 Eaton, Dan L.
 Ferrara, Napoleone
 Fong, Sherman
 Gerber, Hanspeter
 Gerritsen, Mary E.
 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
 Paoni, Nicholas F.
 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin

<120> Secreted and Transmembrane Polypeptides and Nucleic
 Acids Encoding the Same

<130> P2730P1C10

<150> 60/049787
 <151> 1997-06-16

<150> 60/062250
 <151> 1997-10-17

<150> 60/065186
 <151> 1997-11-12

<150> 60/065311
 <151> 1997-11-13

<150> 60/066770
 <151> 1997-11-24

<150> 60/075945
 <151> 1998-02-25

<150> 60/078910
 <151> 1998-03-20

<150> 60/083322
 <151> 1998-04-28

<150> 60/084600
 <151> 1998-05-07

<150> 60/087106
 <151> 1998-05-28

<150> 60/087607

<151> 1998-06-02
 <150> 60/087609
 <151> 1998-06-02
 <150> 60/087759
 <151> 1998-06-02
 <150> 60/087827
 <151> 1998-06-03
 <150> 60/088021
 <151> 1998-06-04
 <150> 60/088025
 <151> 1998-06-04
 <150> 60/088026
 <151> 1998-06-04
 <150> 60/088028
 <151> 1998-06-04
 <150> 60/088029
 <151> 1998-06-04
 <150> 60/088030
 <151> 1998-06-04
 <150> 60/088033
 <151> 1998-06-04
 <150> 60/088326
 <151> 1998-06-04
 <150> 60/088167
 <151> 1998-06-05
 <150> 60/088202
 <151> 1998-06-05
 <150> 60/088212
 <151> 1998-06-05
 <150> 60/088217
 <151> 1998-06-05
 <150> 60/088655
 <151> 1998-06-09
 <150> 60/088734
 <151> 1998-06-10
 <150> 60/088738
 <151> 1998-06-10
 <150> 60/088742
 <151> 1998-06-10
 <150> 60/088810
 <151> 1998-06-10
 <150> 60/088824

<151> 1998-06-10
<150> 60/088826
<151> 1998-06-10

<150> 60/088858
<151> 1998-06-11

<150> 60/088861
<151> 1998-06-11

<150> 60/088876
<151> 1998-06-11

<150> 60/089105
<151> 1998-06-12

<150> 60/089440
<151> 1998-06-16

<150> 60/089512
<151> 1998-06-16

<150> 60/089514
<151> 1998-06-16

<150> 60/089532
<151> 1998-06-17

<150> 60/089538
<151> 1998-06-17

<150> 60/089598
<151> 1998-06-17

<150> 60/089599
<151> 1998-06-17

<150> 60/089600
<151> 1998-06-17

<150> 60/089653
<151> 1998-06-17

<150> 60/089801
<151> 1998-06-18

<150> 60/089907
<151> 1998-06-18

<150> 60/089908
<151> 1998-06-18

<150> 60/089947
<151> 1998-06-19

<150> 60/089948
<151> 1998-06-19

<150> 60/089952
<151> 1998-06-19

<150> 60/090246

<151> 1998-06-22

<150> 60/090252
<151> 1998-06-22

<150> 60/090254
<151> 1998-06-22

<150> 60/090349
<151> 1998-06-23

<150> 60/090355
<151> 1998-06-23

<150> 60/090429
<151> 1998-06-24

<150> 60/090431
<151> 1998-06-24

<150> 60/090435
<151> 1998-06-24

<150> 60/090444
<151> 1998-06-24

<150> 60/090445
<151> 1998-06-24

<150> 60/090472
<151> 1998-06-24

<150> 60/090535
<151> 1998-06-24

<150> 60/090540
<151> 1998-06-24

<150> 60/090542
<151> 1998-06-24

<150> 60/090557
<151> 1998-06-24

<150> 60/090676
<151> 1998-06-25

<150> 60/090678
<151> 1998-06-25

<150> 60/090690
<151> 1998-06-25

<150> 60/090694
<151> 1998-06-25

<150> 60/090695
<151> 1998-06-25

<150> 60/090696
<151> 1998-06-25

<150> 60/090862

<151> 1998-06-26
<150> 60/090863
<151> 1998-06-26

<150> 60/091360
<151> 1998-07-01

<150> 60/091478
<151> 1998-07-02

<150> 60/091544
<151> 1998-07-01

<150> 60/091519
<151> 1998-07-02

<150> 60/091626
<151> 1998-07-02

<150> 60/091633
<151> 1998-07-02

<150> 60/091978
<151> 1998-07-07

<150> 60/091982
<151> 1998-07-07

<150> 60/092182
<151> 1998-07-09

<150> 60/092472
<151> 1998-07-10

<150> 60/091628
<151> 1998-07-02

<150> 60/091646
<151> 1998-07-02

<150> 60/091673
<151> 1998-07-02

<150> 60/093339
<151> 1998-07-20

<150> 60/094651
<151> 1998-07-30

<150> 60/095282
<151> 1998-08-04

<150> 60/095285
<151> 1998-08-04

<150> 60/095302
<151> 1998-08-04

<150> 60/095318
<151> 1998-08-04

<150> 60/095321

<151> 1998-08-04
 <150> 60/095301
 <151> 1998-08-04
 <150> 60/095325
 <151> 1998-08-04
 <150> 60/095916
 <151> 1998-08-10
 <150> 60/095929
 <151> 1998-08-10
 <150> 60/096012
 <151> 1998-08-10
 <150> 60/096143
 <151> 1998-08-11
 <150> 60/096146
 <151> 1998-08-11
 <150> 60/096329
 <151> 1998-08-12
 <150> 60/096757
 <151> 1998-08-17
 <150> 60/096766
 <151> 1998-08-17
 <150> 60/096768
 <151> 1998-08-17
 <150> 60/096773
 <151> 1998-08-17
 <150> 60/096791
 <151> 1998-08-17
 <150> 60/096867
 <151> 1998-08-17
 <150> 60/096891
 <151> 1998-08-17
 <150> 60/096894
 <151> 1998-08-17
 <150> 60/096895
 <151> 1998-08-17
 <150> 60/096897
 <151> 1998-08-17
 <150> 60/096949
 <151> 1998-08-18
 <150> 60/096950
 <151> 1998-08-18
 <150> 60/096959

<151> 1998-08-18
<150> 60/096960
<151> 1998-08-18
<150> 60/097022
<151> 1998-08-18
<150> 60/097141
<151> 1998-08-19
<150> 60/097218
<151> 1998-08-20
<150> 60/097661
<151> 1998-08-24
<150> 60/097952
<151> 1998-08-26
<150> 60/097954
<151> 1998-08-26
<150> 60/097955
<151> 1998-08-26
<150> 60/098014
<151> 1998-08-26
<150> 60/097971
<151> 1998-08-26
<150> 60/097974
<151> 1998-08-26
<150> 60/097978
<151> 1998-08-26
<150> 60/097986
<151> 1998-08-26
<150> 60/097979
<151> 1998-08-26
<150> 60/098525
<151> 1998-08-31
<150> 60/100634
<151> 1998-09-16
<150> 60/100858
<151> 1998-09-17
<150> 60/113296
<151> 1998-12-22
<150> 60/123957
<151> 1999-03-12
<150> 60/141037
<151> 1999-06-23
<150> 60/143048

<151> 1999-07-07
 <150> 60/144758
 <151> 1999-07-20
 <150> 60/145698
 <151> 1999-07-26
 <150> 60/146222
 <151> 1999-07-28
 <150> 60/149396
 <151> 1999-08-17
 <150> 60/158663
 <151> 1999-10-08
 <150> 60/213637
 <151> 2000-06-23
 <150> 60/230978
 <151> 2000-09-07
 <150> 08/743698
 <151> 1996-11-06
 <150> 08/876698
 <151> 1997-06-16
 <150> 08/965056
 <151> 1997-11-05
 <150> 09/105413
 <151> 1998-06-26
 <150> 09/168978
 <151> 1998-10-07
 <150> 09/187368
 <151> 1998-11-06
 <150> 09/202054
 <151> 1998-12-07
 <150> 09/218517
 <151> 1998-12-22
 <150> 09/254311
 <151> 1999-03-03
 <150> 09/254460
 <151> 1999-03-09
 <150> 09/267213
 <151> 1999-03-12
 <150> 09/284291
 <151> 1999-04-12
 <150> 09/380137
 <151> 1999-08-25
 <150> 09/380138

<151> 1998-08-25
<150> 09/380139
<151> 1999-08-25

<150> 09/403296
<151> 1999-10-18

<150> 09/423844
<151> 1999-11-12

<150> 09/664610
<151> 2000-09-18

<150> 09/665350
<151> 2000-09-18

<150> 09/709238
<151> 2000-11-08

<150> 09/808689
<151> 2001-03-14

<150> 09/854816
<151> 2001-05-15

<150> 09/866028
<151> 2001-05-25

<150> 09/866034
<151> 2001-05-25

<150> 09/872035
<151> 2001-06-01

<150> 09/882636
<151> 2001-06-14

<150> 09/941,992
<151> 2001-08-28

<150> PCT/US97/20069
<151> 1997-11-05

<150> PCT/US98/19330
<151> 1998-09-16

<150> PCT/US98/19437
<151> 1998-09-17

<150> PCT/US98/21141
<151> 1998-10-07

<150> PCT/US98/25108
<151> 1998-12-01

<150> PCT/US99/00106
<151> 1999-01-05

<150> PCT/US99/05028
<151> 1999-03-08

<150> PCT/US99/12252

<151> 1999-06-02
<150> PCT/US99/21090
<151> 1999-09-15
<150> PCT/US99/21547
<151> 1999-09-15
<150> PCT/US99/28313
<151> 1999-11-30
<150> PCT/US99/28301
<151> 1999-12-01
<150> PCT/US99/28634
<151> 1999-12-01
<150> PCT/US99/30095
<151> 1999-12-16
<150> PCT/US99/30911
<151> 1999-12-20
<150> PCT/US00/00219
<151> 2000-01-05
<150> PCT/US00/00376
<151> 2000-01-06
<150> PCT/US00/03565
<151> 2000-02-11
<150> PCT/US00/04341
<151> 2000-02-18
<150> PCT/US00/04414
<151> 2000-02-22
<150> PCT/US00/04914
<151> 2000-02-24
<150> PCT/US00/05004
<151> 2000-02-24
<150> PCT/US00/05841
<151> 2000-03-02
<150> PCT/US00/06319
<151> 2000-03-10
<150> PCT/US00/06884
<151> 2000-03-15
<150> PCT/US00/07377
<151> 2000-03-20
<150> PCT/US00/08439
<151> 2000-03-30
<150> PCT/US00/13358
<151> 2000-05-15
<150> PCT/US00/13705

<151> 2000-05-17

<150> PCT/US00/14042

<151> 2000-05-22

<150> PCT/US00/14941

<151> 2000-05-30

<150> PCT/US00/15264

<151> 2000-06-02

<150> PCT/US00/20710

<151> 2000-07-28

<150> PCT/US00/22031

<151> 2000-08-11

<150> PCT/US00/23522

<151> 2000-08-23

<150> PCT/US00/23328

<151> 2000-08-24

<150> PCT/US00/30952

<151> 2000-11-08

<150> PCT/US00/32678

<151> 2000-12-01

<150> PCT/US01/06520

<151> 2001-02-28

<150> PCT/US01/17800

<151> 2001-06-01

<150> PCT/US01/19692

<151> 2001-06-20

<150> PCT/US01/21066

<151> 2001-06-29

<150> PCT/US01/21735

<151> 2001-07-09

<160> 532

<210> 1

<211> 1943

<212> DNA

<213> Homo sapiens

<400> 1

cggacgcgtg ggtgcgaggc gaaggtgacc ggggaccgag catttcagat 50

ctgctcggta gacctgggtgc accaccacca tgttggtctgc aaggtcggtg 100

tgtctccgga cactaccttc taggggttttc caccagattt toaccaaggc 150

ctccctggtt gtgaagaatt ccatcacgaa gaatcaatgg ctgttaaac 200

ctagcaggga atatgccacc aaaacaagaa ttgggatccg gcgtgggaga 250

actggccaag aactcaaaga ggcagcattg gaaccatcga tggaaaaaat 300

atttaaaatt gatcagatgg gaagatgggt tgttgctgga ggggctgctg 350
 ttggtcttgagg agcattgtgc tactatggct tgggactgtc taatgagatt 400
 ggagctattg aaaaggctgt aatttggcct cagtatgtca aggtagaat 450
 tcattccacc tatatgtact tagcaggagag tattgggtta acagctttgt 500
 ctgccatagc aatcagcaga acgctgttgc tcatgaact catgatgaga 550
 ggctcttggtg tgacaattgg tgtgacctt gcagccatgg ttggagctgg 600
 aatgctggta cgatcaatac catatgacca gagccaggc ccaaagcatc 650
 ttgcttggtt gctacattct ggtgtgatgg gtgcagtggg ggctctctg 700
 acaatattag ggggtcctct tctcatcaga gctgcatggg acacagctgg 750
 cattgtggga ggctctctca ctgtggccat gtgtgcgccc agtgaaggt 800
 ttctgaacat ggggtgaccc ctgggagtggt gctgggtct cgtctttgtg 850
 tctcattgg gatctatgtt tctccacct accaccgtgg ctgggtgccac 900
 tctttactca gtggcaatgt acggtggatt agttcttttc agcatgttcc 950
 ttctgtatga taccagaaa gtaatcaagc gtgcagaagt atcaccaatg 1000
 tatggagtgc aaaaatatga tcccataac tcgatgctga gtatctacat 1050
 ggatacatga aatatattta tgcgagttgc aactatgctg gcaactggag 1100
 gcaacagaaa gaaatgaagt gactcagctt ctggctctc tgctacatca 1150
 aatatcttgt ttaatggggc agatatgcat taaatagttt gtacaagcag 1200
 ctttcgttga agtttagaag ataagaaaca tgcacatata ttaaatgtt 1250
 cgggtaatgt gatgcctcag gtctgcctt tttctggag aataaatgca 1300
 gtaatctctc cccaaataag cacacacatt tcaattctc atgtttgagt 1350
 gattttaaaa tgttttgggt aatgtgaaa ctaagtttg tgctcatgaga 1400
 atgtaagtct tttttctact ttaaaattta gtaggttcac tgagtaacta 1450
 aaatttagca aacctgtgtt tgcataattt tttggagtgc agaattattg 1500
 aattaatgtc ataagtgtt tggagctttg gtaaggagc cagagagaag 1550
 gagtacactg cagtctttt tttttttaa tacttagaac ttgacacttg 1600
 tgttattgat tagtgaggag ccagtaagaa acatctgggt atttggaac 1650
 aagtggtcat tgttacatc atttgcgtga ctaacaaaa ctgttcaccc 1700
 tgaaacaggc acaggtgatg cattctctg ctgttgcttc tcagtctct 1750
 ctttccaata tagatgtggt catgtttgac ttgtacagaa tgttaatcat 1800
 acagagaatc ctgtatggaa ttatatatgt gtgttttact tttgaatgtt 1850
 acaaaaggaa ataacttta aactattctc aagagaaaat attcaaaagc 1900

tgaaatatgt tgctttttcc agaatacaaa cagtatactc atg 1943

<210> 2

<211> 345

<212> PRT

<213> Homo sapiens

<400> 2

Met	Leu	Ala	Ala	Arg	Leu	Val	Cys	Leu	Arg	Thr	Leu	Pro	Ser	Arg	1	5	10	15
Val	Phe	His	Pro	Ala	Phe	Thr	Lys	Ala	Ser	Pro	Val	Val	Lys	Asn	20	25	30	
Ser	Ile	Thr	Lys	Asn	Gln	Trp	Leu	Leu	Thr	Pro	Ser	Arg	Glu	Tyr	35	40	45	
Ala	Thr	Lys	Thr	Arg	Ile	Gly	Ile	Arg	Arg	Gly	Arg	Thr	Gly	Gln	50	55	60	
Glu	Leu	Lys	Glu	Ala	Ala	Leu	Glu	Pro	Ser	Met	Glu	Lys	Ile	Phe	65	70	75	
Lys	Ile	Asp	Gln	Met	Gly	Arg	Trp	Phe	Val	Ala	Gly	Gly	Ala	Ala	80	85	90	
Val	Gly	Leu	Gly	Ala	Leu	Cys	Tyr	Tyr	Gly	Leu	Gly	Leu	Ser	Asn	95	100	105	
Glu	Ile	Gly	Ala	Ile	Glu	Lys	Ala	Val	Ile	Trp	Pro	Gln	Tyr	Val	110	115	120	
Lys	Asp	Arg	Ile	His	Ser	Thr	Tyr	Met	Tyr	Leu	Ala	Gly	Ser	Ile	125	130	135	
Gly	Leu	Thr	Ala	Leu	Ser	Ala	Ile	Ala	Ile	Ser	Arg	Thr	Pro	Val	140	145	150	
Leu	Met	Asn	Phe	Met	Met	Arg	Gly	Ser	Trp	Val	Thr	Ile	Gly	Val	155	160	165	
Thr	Phe	Ala	Ala	Met	Val	Gly	Ala	Gly	Met	Leu	Val	Arg	Ser	Ile	170	175	180	
Pro	Tyr	Asp	Gln	Ser	Pro	Gly	Pro	Lys	His	Leu	Ala	Trp	Leu	Leu	185	190	195	
His	Ser	Gly	Val	Met	Gly	Ala	Val	Val	Ala	Pro	Leu	Thr	Ile	Leu	200	205	210	
Gly	Gly	Pro	Leu	Leu	Ile	Arg	Ala	Ala	Trp	Tyr	Thr	Ala	Gly	Ile	215	220	225	
Val	Gly	Gly	Leu	Ser	Thr	Val	Ala	Met	Cys	Ala	Pro	Ser	Glu	Lys	230	235	240	
Phe	Leu	Asn	Met	Gly	Ala	Pro	Leu	Gly	Val	Gly	Leu	Gly	Leu	Val	245	250	255	
Phe	Val	Ser	Ser	Leu	Gly	Ser	Met	Phe	Leu	Pro	Pro	Thr	Thr	Val	260	265	270	
Ala	Gly	Ala	Thr	Leu	Tyr	Ser	Val	Ala	Met	Tyr	Gly	Gly	Leu	Val				

	275		280		285
Leu Phe Ser Met Phe Leu Leu Tyr Asp Thr Gln Lys Val Ile Lys					
	290		295		300
Arg Ala Glu Val Ser Pro Met Tyr Gly Val Gln Lys Tyr Asp Pro					
	305		310		315
Ile Asn Ser Met Leu Ser Ile Tyr Met Asp Thr Leu Asn Ile Phe					
	320		325		330
Met Arg Val Ala Thr Met Leu Ala Thr Gly Asn Arg Lys Lys					
	335		340		345

<210> 3
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 3
 tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 4
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 4
 caggaaacag ctatgaccac ctgcacacct gcaaatccat t 41

<210> 5
 <211> 3033
 <212> DNA
 <213> Homo sapiens

<400> 5
 gaaggctgcc tcgctggtcc gaattcgggtg gcgccacgtc cgcocgtctc 50
 cgccctctgc atcgcggcctt cggcggcctc cacctagaca cctaacagtc 100
 gcggagccgg ccgcgtcgtg agggggcgcg cacggggagt cgggcggtct 150
 tgtcatctt ggctacctgt gggtcgaaga tgtcggacat cggagactgg 200
 ttcaggagca tcccgcgat cacgcgctat tggttcgcc ccaccgtcgc 250
 cgtgcacctg gtgcgaaac tcggcctcat cagcccgcc tacctcttcc 300
 tctggcccg agccttctt tatcgtcttc agatttggag gccaatcoat 350
 gccacctttt atttccctgt gggtcaggga actggatttc tttatttggt 400
 caatttatat ttcttatatc agtattctac gcgacttgaa acaggagctt 450
 ttgatgggag gccagcagac tatttattca tgctcctctt taactggatt 500
 tgcacgtga ttactggctt agcaatggat atgcagttgc tgaatgattcc 550

totgatcatg tcagtacttt atgtctgggc ccagctgaac agagacatga 600
 ttgtatcatt ttggtttgga acacgattta aggcctgcta tttaccctgg 650
 gttatccttg gattcaacta tatcatcgga ggctcggtaa tcaatgagct 700
 tattggaat ctggttggaac atctttattt ttctctaattg ttcagatacc 750
 caatggactt gggaggaaga aattttctat ccacacotca gtttttgtaac 800
 cgctggctgc ccagtaggag aggaggagta tcaggatttg gtgtgcccc 850
 tgctagcatg aggcgagctg ctgatcagaa tggcggaggc gggagacaca 900
 actggggcca gggctttcga cttggagacc agtgaagggg cggcctcggg 950
 cagccgctcc tctcaagcca catttcctcc cagtgcctggg tgcacttaac 1000
 aactgcgttc tggctaacac tgttggaact gaccacact gaatgtagtc 1050
 tttcagtacg agacaaagt tcttaaatcc cgaagaaaa tataagtgtt 1100
 ccacaagttt cagcattctc attcaagtcc ttactgctgt gaagaacaaa 1150
 taccgaactgt gcaaattgca aaactgacta catttttttg tgctctctct 1200
 tctccccctt ccgtctgaat aatgggtttt agcgggtcct aatctgctgg 1250
 cattgagctg gggctgggtc accaaaacct tcccaaaagg acccttatctc 1300
 tttcttgcaac acatgcctct ctcccacttt tcccaacccc cacatttgca 1350
 actagaaaaa gttgcccata aaattgctct gcccttgaca ggttctgtta 1400
 tttattgact tttgccaagg ctggtcacaa caatcatatt caggttattt 1450
 tccccctttg gtggcagaac tgttaccaat agggggagaa gacagccacg 1500
 gatgaagcgt ttctcagctt ttggaattgc ttcgactgac atccgttggt 1550
 aaccgtttgc cactcttcag atatttttta taaaaaagt accactgagt 1600
 tcatgagggc cacagattgg ttattaatga gatacgaggg ttggtgctgg 1650
 gtgtttgttt cctgagctaa gtgatcaaga ctgtagtgga gttgcagcta 1700
 acatgggtta ggtttaaac atgggggatg caccoccttg cgtttcata 1750
 gtgacctac tggcttttg tagctggagt agttgggttg ctttgtgtta 1800
 ggaggatcca gatcatgttg gctacagga gatgctctct ttgagaggto 1850
 ctgggcattg attccattt caatctcatt ctggatatgt gttcattgag 1900
 taaaggagga gagacctoa tacgtattt aaatgtcaact tttttgcta 1950
 tccccggtt tttggtcatg tttcaattaa ttgtgaggaa ggcgcagctc 2000
 ctctctgcaac gtatgacatt ttttaaagct aatgtaagca catctaagg 2050
 aataacatga tttgaagttg aaatggcttt agaatcattt gggtttgagg 2100
 gtgtgttatt ttgagtcag aatgtacaag ctctgtgaat cagaccagct 2150

taaataccca cacctttttt tcgtaggtgg gcttttccta tcagagcttg 2200
 gctcataacc aaataaagt ttttgaaggc catggctttt cacacagtta 2250
 ttttatttta tgacgttato tgaagcaga ctgtaggag cagtattgag 2300
 tggtgtcac acttgaggc aactaaaaag gcttcaaagc tttgatcag 2350
 tttcttttca ggaacattg tgctctaaca gtatgactat tcttccccc 2400
 actcttaaac agtgtgatgt gtgttatcct aggaaatgag agttggcaa 2450
 caacttctca ttttgaatag agtttgtgtg tacttctcca tatttaattt 2500
 atatgataaa ataggtgggg agagtctgaa ccttaactgt catgttttgt 2550
 tgttcctctg tggccacaat aaagtctact tgtaaaattt tagaggccat 2600
 tactccaatt atgttgacg tacactcatt gtacaggcgt ggagactcat 2650
 tgtatgtata agaataattt tgacagtgg tgaccggag tctctggtgt 2700
 accctcttac cagtcagctg cctgcgagca gtcatttttt cctaaaggtt 2750
 tacaagtatt tagaactttt cagttcaggg caaaatgttc atgaagtatt 2800
 tcctcttaaa catggttagg aagctgatga cggtattgat tttgtctgga 2850
 ttatgtttct ggaataattt taccaaaaca agctatttga gttttgacct 2900
 gacaaggcaa aacatgacag tggattctct ttacaaatgg aaaaaaaaaa 2950
 tccttatttt gtataaagga cttccctttt tgtaaactaa tcctttttat 3000
 tggtaaaat tgtaaatata aatgtgcaac ttg 3033

<210> 6
 <211> PRT
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Ser Asp Ile Gly Asp Trp Phe Arg Ser Ile Pro Ala Ile Thr
 1 5 10
 Arg Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys
 20 25 30
 Leu Gly Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala
 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn
 65 70 75
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp Ile Cys Ile Val Ile Thr Gly Leu Ala Met Asp Met Gln Leu
 110 115 120
 Leu Met Ile Pro Leu Ile Met Ser Val Leu Tyr Val Trp Ala Gln
 125 130 135
 Leu Asn Arg Asp Met Ile Val Ser Phe Trp Phe Gly Thr Arg Phe
 140 145 150
 Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu Gly Phe Asn Tyr Ile
 155 160 165
 Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly Asn Leu Val Gly
 170 175 180
 His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met Asp Leu Gly
 185 190 195
 Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg Trp Leu
 200 205 210
 Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Pro Ala
 215 220 225
 Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Gly Arg His
 230 235 240
 Asn Trp Gly Gln Gly Phe Arg Leu Gly Asp Gln
 245 250

<210> 7
 <211> 1373
 <212> DNA
 <213> Homo sapiens

<400> 7
 ggggccgcgg tctagggcgg ctacgtgtgt tgccatagcg accattttgc 50
 attaactggt tggtagcttc tatcctgggg gctgagcgac tgcgggccag 100
 ctcttccctc actccctctc ggctccttgt ggcccaaagg cctaaccggg 150
 gtccggcggt ctggcctagg gatcttcccc gttgcccttt tggggcgggg 200
 tggctgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250
 ggggttctgc gaggccaga ctggtccatc cccatcttgg acttttgga 300
 acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350
 gccagagacc ggtgattttg tgggcctgtg ttccccctgt ttttgatgat 400
 gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaa 450
 actagttgaa aagctgttag aaggttacct caaagaaatt ggaattaatg 500
 aagatcaatt tcaagaagca tgcactcttc ctcttgcaaa gaccatata 550
 tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600
 taaagcaatg atggtccaga aaaacattga aatgcagctg caagccattc 650
 gaataattca agagagaaat ggtgtattac ctgactgctt aaccgatggc 700

tctgatgtgg tcagtgacct tgaacacgaa gagatgaaaa tcctgagggg 750
 agttcttaga aaatcaaaag aggaatatga ccaggaagaa gaaaggaaga 800
 ggaaaaaaca gttatcagag gctaaaacag aagagccac agtgattcc 850
 agtgaagctg caataatgaa taattccaa ggggatggtg aacattttgc 900
 acaccacccc tcagaagtta aaatgcattt tgctaatacag tcaatagaac 950
 ctttgggaag aaaagtgtaa aggtctgaaa ctctctccct cccacaaaaa 1000
 ggctgaaga ttctggctt agagcatgag agcattgaag gaccaatagc 1050
 aaacttatca gtacttgtaa cagaagaact tcggcaacga gaacactatc 1100
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaacccactg gggaggtaga 1200
 ggaaatgaca gagaaccag aaatgacagc agaggagaag caaacattac 1250
 taagaggag attgcttgca gagaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaatt gtcttaaaaa 1350
 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Ala Ala Glu Glu Asp Glu Val Glu Trp Val Val Glu Ser
 1 5 10 15
 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
 20 25 30
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr
				155					160					165
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys
				170					175					180
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln
				185					190					195
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr
				200					205					210
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn
				215					220					225
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val
				230					235					240
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys
				245					250					255
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys
				260					265					270
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn
				275					280					285
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr
				290					295					300
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met
				305					310					315
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr
				320					325					330
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu
				335					340					345
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu
				350					355					360
Lys	Glu	Glu	Val	Ile	Asn	Lys								
				365										

<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 9
 gggcacagca catgtgaagt tttgatgat gaagaagaaa gcaaatgtac 50
 ctatacagag attcatcagc aatacaaaaga actagttgaa aagctgttag 100
 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
 tgcaattctc ctcttgcaa gaccataca tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaagcaat gatgtgccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
 ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400
 gaggaatatg accaggaa 418

<210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 10
 ttgacctata cagagattca tc 22

<210> 11
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 11
 ctaagaactt cctcaggat ttt 23

<210> 12
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 12
 atgaagatca atttcaagaa gcatgcactt ctctcttgc 40

<210> 13
 <211> 2886
 <212> DNA
 <213> Homo sapiens

<400> 13
 gcgtggtttt tgttctgcaa taggcggcctt agaggaggagg gctttttcgc 50
 ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgtctgc 100
 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150
 cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200
 acagtgtctg agtcatcctg taatatgtct cttgtcaaca atgtatacat 250
 tcttctctagg tgccatattc attgctttta gctcaagtcg catcttacta 300
 gtgaagtatt ctgccaatga agaaaacaag tatgattato ttccaactac 350
 tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 400
 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

tcctggaagg aattctctga tttcatgaag tgggtccattc ctgcctttct 500
 ttatttctctg gataacttga ttgtcttcta tgcctgtcc tatcttcaac 550
 cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 600
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650
 cctcctgact ttatttttgt ctatttgtgc cttgaactgcc gggactaaaa 700
 ctttacagca caacttggca ggacgtggat ttcacacga tgcctttttc 750
 agcccttcca attcctgcct tcttttcaga agtgagtgtc ccagaaaaga 800
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaaacacca 850
 cagccagagt tttcagtcac atccgtcttg gcacgggcca tgttcttatt 900
 atagtccagt gttttatttc ttcaatggct aatatctata atgaaaagat 950
 actgaaggag gggaaccagc tcaactgaaag catcttcata cagaacacga 1000
 aactctattt ctttggcatt ctgtttaatg ggctgactct gggccttcag 1050
 aggagtaacc gtgacagat taagaactgt ggattttttt atggccacag 1100
 tgcattttca gtaccctta tttttgtaac tgcattccag ggcctttcag 1150
 tggctttcat tctgaagttc ctggataaca tgttccatgt cttgatggcc 1200
 caggttacca ctgtcattat cacaacagtg tctgtcctgg tctttgaact 1250
 caggccctcc ctggaatttt tottggaaag cccatcagtc cttctctcta 1300
 tatttattta taatgccagc aagcctcaag ttccggaata cgcacctagg 1350
 caagaaagga tccgagatct aagtggcaat ctttgggagc gttccagtgg 1400
 ggtggagaa gaactagaaa gacttaccaa acccaagagt gatgagtcag 1450
 atgaagatc tttctaactg gtaccacat agtttgcagc tctcttgaac 1500
 cttattttca catttctagt gtttgaata tttatctttt cactttgata 1550
 aaccagaaat gtttctaaat cctaattatto ttgcatata tctagctact 1600
 ccctaataatg ttccatccaa ggcttagagt acccaaggc taagaaattc 1650
 taaagaactg atacaggagt aacaatatga agaattcatt aatatctcag 1700
 tacttgataa atcagaaagt tataatgtgca gattattttc cttggccttc 1750
 aagcttccaa aaaacttgta ataatcatgt tagctatagc ttgtatatac 1800
 acatagagat caatttgcca aatattcaca atcatgtagt tctagtttac 1850
 atgcaaaagt cttccctttt taacattata aaagctaggt tgtctcttga 1900
 attttgaggc cctagagata gtcattttgc aagtaaagag caacgggacc 1950
 ctttctaaaa acgttggttg aaggacctaa atacctggcc ataccataga 2000
 tttgggatga tgtagtctgt gctaaatatt ttgctgaaga agcagtttct 2050

cagacacaac atctcagaat ttaattttt agaaattcat gggaaattgg 2100
 atttttgtaa taatcttttg atgttttaaa cattggttcc ctatgcacca 2150
 tagttaccac ttgtatttta agtcatttaa acaagccacg gtggggcttt 2200
 ttctcctca gtttgaggag aaaatcttg atgtcattac tctgaatta 2250
 ttacattttg gagaataaga gggcatttta ttttattagt tactaattca 2300
 agctgtgact attgtatata tttccaagag ttgaaatgct ggcttcagaa 2350
 tcataccaga ttgtcagtga agctgatgcc taggaacttt taaagggatc 2400
 ctttcaaaag gatcacttag caaacacatg ttgactttta actgatgtat 2450
 gaatattaat actotaaaaa tagaaagacc agtaatatat aagtcacttt 2500
 acagtgtcac ttcacactta aaagtgcacg gtatttttca tggatatttg 2550
 catgcagcca gtttaacttc gtagatagag aagtcagggt atagatgata 2600
 ttaaaaatta gcaaacaaaa gtgacttgct cagggtcatg cagctgggtg 2650
 atgatagaag agtgggcttt aactggcagg cctgtatgtt tacagactac 2700
 catactgtaa atatgagctt tatggtgtca ttctcagaaa cttatacatt 2750
 tctgctctcc ttctcctaa gtttcatgca gatgaatata aggtaataata 2800
 ctattatata attcatttgt gatattccaa ataatatgac tggcaagaat 2850
 tggtggaat ttgtaattaa aataattatt aaacct 2886

<210> 14
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 14
 Met Glu Lys Gln Cys Cys Ser His Pro Val Ile Cys Ser Leu Ser
 1 5 10 15
 Thr Met Tyr Thr Phe Leu Leu Gly Ala Ile Phe Ile Ala Leu Ser
 20 25 30
 Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn
 35 40 45
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu
 50 55 60
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys
 65 70 75
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu
 80 85 90
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe
 95 100 105
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro
 110 115 120

Ala	Met	Ala	Val	Ile	Phe	Ser	Asn	Phe	Ser	Ile	Ile	Thr	Thr	Ala	
				125					130					135	
Leu	Leu	Phe	Arg	Ile	Val	Leu	Lys	Arg	Arg	Leu	Asn	Trp	Ile	Gln	
				140					145					150	
Trp	Ala	Ser	Leu	Leu	Thr	Leu	Phe	Leu	Ser	Ile	Val	Ala	Leu	Thr	
				155					160					165	
Ala	Gly	Thr	Lys	Thr	Leu	Gln	His	Asn	Leu	Ala	Gly	Arg	Gly	Phe	
				170					175					180	
His	His	Asp	Ala	Phe	Phe	Ser	Pro	Ser	Asn	Ser	Cys	Leu	Leu	Phe	
				185					190					195	
Arg	Ser	Glu	Cys	Pro	Arg	Lys	Asp	Asn	Cys	Thr	Ala	Lys	Glu	Trp	
				200					205					210	
Thr	Phe	Pro	Glu	Ala	Lys	Trp	Asn	Thr	Thr	Ala	Arg	Val	Phe	Ser	
				215					220					225	
His	Ile	Arg	Leu	Gly	Met	Gly	His	Val	Leu	Ile	Ile	Val	Gln	Cys	
				230					235					240	
Phe	Ile	Ser	Ser	Met	Ala	Asn	Ile	Tyr	Asn	Glu	Lys	Ile	Leu	Lys	
				245					250					255	
Glu	Gly	Asn	Gln	Leu	Thr	Glu	Ser	Ile	Phe	Ile	Gln	Asn	Ser	Lys	
				260					265					270	
Leu	Tyr	Phe	Phe	Gly	Ile	Leu	Phe	Asn	Gly	Leu	Thr	Leu	Gly	Leu	
				275					280					285	
Gln	Arg	Ser	Asn	Arg	Asp	Gln	Ile	Lys	Asn	Cys	Gly	Phe	Phe	Tyr	
				290					295					300	
Gly	His	Ser	Ala	Phe	Ser	Val	Ala	Leu	Ile	Phe	Val	Thr	Ala	Phe	
				305					310					315	
Gln	Gly	Leu	Ser	Val	Ala	Phe	Ile	Leu	Lys	Phe	Leu	Asp	Asn	Met	
				320					325					330	
Phe	His	Val	Leu	Met	Ala	Gln	Val	Thr	Thr	Val	Ile	Ile	Thr	Thr	
				335					340					345	
Val	Ser	Val	Leu	Val	Phe	Asp	Phe	Arg	Pro	Ser	Leu	Glu	Phe	Phe	
				350					355					360	
Leu	Glu	Ala	Pro	Ser	Val	Leu	Leu	Ser	Ile	Phe	Ile	Tyr	Asn	Ala	
				365					370					375	
Ser	Lys	Pro	Gln	Val	Pro	Glu	Tyr	Ala	Pro	Arg	Gln	Glu	Arg	Ile	
				380					385					390	
Arg	Asp	Leu	Ser	Gly	Asn	Leu	Trp	Glu	Arg	Ser	Ser	Gly	Asp	Gly	
				395					400					405	
Glu	Glu	Leu	Glu	Arg	Leu	Thr	Lys	Pro	Lys	Ser	Asp	Glu	Ser	Asp	
				410					415					420	
Glu	Asp	Thr	Phe												

<210> 15
<211> 755
<212> DNA
<213> Homo sapiens

<400> 15
cgtgcctgcg caatgggtgt cgggtccgct ttttcccaat ccggacgtaa 50
tcgtggtttt tgttctgcaa taggcggctt agagggaggg gctttttcgc 100
ctatacctac tgtagcttct ccacgtatgc accctaaagg ctactgctgc 150
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgtttctc 200
cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 250
acagtgtgt agtcatcctg taatatgctc ctgtgcaaca atgtatacat 300
tcctgctagg tgccatattc attgctttta gctcaagtgc catcttacta 350
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 450
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
tcctggaagg aattctctga tttcatgaag tgggtccattc ctgcctttct 550
ttatttcctg gataacttga ttgtcttcta tgtcctgtcc tatcttcaac 600
cagccatggc tgttatcttc tcaaatTTTA gcattataac aacagctctt 650
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
cttta 755

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
ctatacctac tgtagcttct 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ccttccagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtctgt agtcacatctgt taatatgtctt cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggacgcgtg ggcggagcgc tgggcggagc cgtggggcgc gcttggctag 50
cgcgcgcgcg ccgtggctaa ggctgctacg aagcgagctt gggaggagca 100
gcgcgcctgc gggcagagga gcaccccgtc taccaggtcc caagcgcgct 150
ggcccgcgcg tcatggccaa aggagaagc gccgagagcg gctccgcggc 200
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaa aagaacaac agttgtctgt ttgcaacaag 300
ctttgctatg cacttggggg agccccctac caggtgacgg gctgtgccct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtgggccctt 400
tcctcgcttc catcatctgt ttgtggggcc gagcctggga tgcacacaca 450
gacccccctg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500
tcgccttatg ccctggatca tctctccac gccctgggcc gtcattgcct 550
acttctcat ctggttcgtg ccgacttcc cacacggcca gacctattgg 600
tacctgcttt tctattgcct ctttgaacaa atggtcacgt gtttccatgt 650
tcctactctg gctctcacca tggtcatcag caaccgagca gactgagcgg 700
gattctgccca ccgcctatcg gatgactgtg gaagtgtctg gcacagtgtc 750
gggcacggcg atccagggac aaatcggtgg ccaagcagac acgccttgtt 800
tcagggactt caatagctct acagtagctt cacaagtgc caaccataca 850
catggcacca cttcacacag ggaacgcaa aaggcatacc tgcctggcgc 900
gggggtcatt gtctgtatct atataatctg tgctgtcato ctgatcctgg 950
gcgtgcggga gcagagagaa ccttatgaag cccagcagtc tgagccaatc 1000
gcctacttcc ggggcctacg gctggtcatg agccacggcc cacaacataa 1050
acttattact ggcttctctt tcacctcctt ggctttcatg ctggtggagg 1100
ggaactttgt cttgttttgc acctacacct tgggcttcgc caatgaattc 1150
cagaatctac tcctggccat catgctctcg gccactttaa ccattcccat 1200
ctggcagtggt ttcttgacct ggtttgcaa gaagacagct gtatatgttg 1250

ggatctcatc agcagtgcca tttctcatct tggtagccct catggagagt 1300
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtgtggc 1350
 agctgccttc ttactaccct ggtccatgct gctgatgtc attgacgact 1400
 tccatctgaa gcagcccccac ttccatggaa ccgagcccat cttcttctcc 1450
 ttctatgtct tcttcaccaa gtttgcctct ggagtgtcac tgggcatttc 1500
 taccctcagt ctggaacttg caggggtacca gaccctgggc tgctcgcage 1550
 cggaacgtgt caagtttaca ctgaacatgc tcgtgaccat ggtcccata 1600
 gttctcatcc tgctgggcct gctgctcttc aaaatgtacc ccattgatga 1650
 ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700
 ccagcagctc tggctgctca gaaacagact ccacagagct ggctagcatc 1750
 ctctagggcc cgccacgttg cccgaagcca ccatgcagaa ggccacagaa 1800
 gggatcagga cctgtctgcc ggcttgctga gcagctggac tgcagggtgt 1850
 aggaaggcaa ctgaagactc aaggaggtgg ccagagacac ttgctgtgct 1900
 cactgtgggg ccggtgctc tgtggcctcc tgctctccct ctgctgctc 1950
 gtggggccaa gccctgggac tgccactgtg aatatccaa ggactgatcg 2000
 ggctagccc ggaacactaa ttagaaaacc ttttttttac agagcctaata 2050
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
 gtgagctatt aatgttatta atttcataa aagctggaaa gc 2142

<210> 20
 <211> 458
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu
 1 5 10 15
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser
 20 25 30
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
 35 40 45
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
 50 55 60
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
 65 70 75
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
 80 85 90
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
 95 100 105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val Leu
110	115	120
Gly Thr Val Leu	Gly Thr Ala Ile Gln	Gly Gln Ile Val Gly Gln
125	130	135
Ala Asp Thr Pro Cys	Phe Gln Asp Phe Asn Ser Ser Thr Val Ala	
140	145	150
Ser Gln Ser Ala Asn	His Thr His Gly Thr Thr Ser His Arg Glu	
155	160	165
Thr Gln Lys Ala Tyr	Leu Leu Ala Ala Gly Val Ile Val Cys Ile	
170	175	180
Tyr Ile Ile Cys Ala	Val Ile Leu Ile Leu Gly Val Arg Glu Gln	
185	190	195
Arg Glu Pro Tyr Glu	Ala Gln Gln Ser Glu Pro Ile Ala Tyr Phe	
200	205	210
Arg Gly Leu Arg Leu	Val Met Ser His Gly Pro Tyr Ile Lys Leu	
215	220	225
Ile Thr Gly Phe Leu	Phe Thr Ser Leu Ala Phe Met Leu Val Glu	
230	235	240
Gly Asn Phe Val Leu	Phe Cys Thr Tyr Thr Leu Gly Phe Arg Asn	
245	250	255
Glu Phe Gln Asn Leu	Leu Leu Ala Ile Met Leu Ser Ala Thr Leu	
260	265	270
Thr Ile Pro Ile Trp	Gln Trp Phe Leu Thr Arg Phe Gly Lys Lys	
275	280	285
Thr Ala Val Tyr Val	Gly Ile Ser Ser Ala Val Pro Phe Leu Ile	
290	295	300
Leu Val Ala Leu Met	Glu Ser Asn Leu Ile Ile Thr Tyr Ala Val	
305	310	315
Ala Val Ala Ala Gly	Ile Ser Val Ala Ala Phe Leu Leu Pro	
320	325	330
Trp Ser Met Leu Pro	Asp Val Ile Asp Asp Phe His Leu Lys Gln	
335	340	345
Pro His Phe His Gly	Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val	
350	355	360
Phe Phe Thr Lys Phe	Ala Ser Gly Val Ser Leu Gly Ile Ser Thr	
365	370	375
Leu Ser Leu Asp Phe	Ala Gly Tyr Gln Thr Arg Gly Cys Ser Gln	
380	385	390
Pro Glu Arg Val Lys	Phe Thr Leu Asn Met Leu Val Thr Met Ala	
395	400	405
Pro Ile Val Leu Ile	Leu Leu Gly Leu Leu Leu Phe Lys Met Tyr	
410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430
 Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450
 Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
 gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50
 tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100
 acccatgaa gccacgacgt ctgagccaat cgccacttc cggggcctac 150
 ggctggatcat gagccacggc ccatacatca aacttattac tggcttcctc 200
 ttcacctcct tggctttcat gctggtggag gggaaacttg tcttgttttg 250
 cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctctggcca 300
 tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350
 cggtttggca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcatc ttggtggccc tcattggagag taacctcatc attacatatg 450
 cggtagctgt ggcagctggc atcagtgtgg cagctgcctt ctactaccc 500
 tggtcctatgc tgcctgatgt cattgacgac ttccatctga agcagcccca 550
 ctccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
 ggggcttcgg cgccagcggc cagcgcagtg cggctctgga aggatttaca 50
 aaagggtcag gtatgagcag gtctgaagac taacattttg tgaagtgtga 100
 aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
 cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
 cttactgca gtaacactcc accatataga ccggccttta cttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400
 ctggccttgt acttgaata ctgagttgtt taggactttc tattgtggca 450

aacttcaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500
tacctttggt atgggctcat tatatatgtt tgttcagacc atcctttcct 550
accaaagtga gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttggtta tctggtgtgg agtaagtga cttagcatgc tgacttgctc 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaaatcc 700
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750
gcagaatggt ctatgtcatt ttccttcttt ggttttttcc tgacttacat 800
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850
taacctctta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900
ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaatgatt 950
atgatttctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu
1 5 10 15
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
20 25 30
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
35 40 45
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
50 55 60
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
65 70 75
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
80 85 90
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
95 100 105
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
110 115 120
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
125 130 135

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile
140 145 150

His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp
155 160 165

Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu
170 175 180

His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp
185 190 195

Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala
200 205 210

Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr
215 220 225

Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn
230 235 240

Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn
245 250 255

Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile
260 265

<210> 24
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 14, 484
<223> unknown base

<400> 24
cggacgcttg ggcngcgcca gcggccagcg ctagtcggtc tggtaagtgc 50
ctgatgccga gttccgtctc tcgggtcttt tcttggtccc aggcaaagcg 100
gagcggagat cctcaaacgg cctagtgctt gcgcgttcgg gagaaaatca 150
gcggtctaata taattcctct ggtttggtga agcagttacc aagaatcttc 200
aaccctttcc cacaaaagct aattgagtac acgttcctgt tgagtacacg 250
ttcctgttga ttacaaaaag gtgcaggtat gacgaggtct gaagactaac 300
attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtgggttca 350
gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
ctttcatatt ttcatcatt actgcagtaa cactccacca tatagaccgg 450
gctttacctt atatcagtga cactggtaca gtanc 485

<210> 25
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtgg ttccagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat ggggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc gcgccgcgcg tgcgtcccg agtgcaagtg agcttctcgg 50
ctgccccgcg ggccgggggtg cggagccgac atgcgccgcg ttctcggcct 100
ccttctgggtc ttgcgccgct gcaccttcgc cttgtacttg ctgtcgacgc 150
gactgccccg cgggcggaga ctgggctcca ccgaggaggc tggaggcagg 200
tcgctgtggt tccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaag agcaccaggc ctactgttc ctgctcttct 300
gcggcgccta cctctacaa cagggtttg ccatccccg ctccagcttc 350
ctgaatgtt tagctggtgc cttgtttggg ccatggctgg ggcctctgct 400
gtgctgtgtg ttgacctcg tgggtgccac atgctgtac ctgctctcca 450
gtatttttg caaacagttg gtggtgtcct actttctga taaagtggcc 500
ctgctgcaga gaaagggtga ggagaacaga aacagottgt ttttttctt 550
attgttttg agacttttc ccatgacacc aaactgggtc ttgaacctct 600
cggcccaat tctgaacatt cccatcgtgc agttcttctt ctcagttctt 650
atcggtttga tcccatataa tttcatctgt gtgcagacag ggtccactct 700
gtcaacccta acctctctg atgctctttt ctctctggac actgtcttta 750
agctgtttgc cattgccatg gtggcattaa ttcttggaac cctcattaaa 800
aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaatac 850
tatacacagt agaaaagaca catgatctgg attttctgtt tggccatcc 900
ctggactcag ttgcttattt gtgtaatgga tgggttcctc taaagccctc 950
cattgttttt gattgccttc tataggtgat gtggacactg tgcataaatg 1000

tgcagtgtct tttcagaag gacactctgc tcttgaaggt gtattacatc 1050
 aggtttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctcct 1100
 agaaaatgct gtttgtggcc gggcgcggtg gctcagcct gtaatcccag 1150
 cactttggga ggcgaggcc ggtgattcac aaggctcagga gttcaagacc 1200
 agcctggcca agatggtgaa atcctgtctc taataaaaaa acaaaaatta 1250
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
 gcaggagaat tgcttgaacc aaggtggcag aggttgaggt aagccaagat 1350
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28
 <211> 264
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Arg Pro Leu Leu Gly Leu Leu Leu Val Phe Ala Gly Cys Thr
 1 5 10 15
 Phe Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg
 20 25 30
 Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro
 35 40 45
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu
 50 55 60
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly
 65 70 75
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe
 80 85 90
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu
 95 100 105
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr
 110 115 120
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe
 125 130 135
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg
 140 145 150
 Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met
 155 160 165
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile
 170 175 180
 Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro
 185 190 195
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu
 200 205 210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu
 215 225
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys
 230 235 240
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala
 245 250 255
 Asn His Ile His Ser Arg Lys Asp Thr
 260

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
 ccgaggcggg aggagcccga gggggcgcgca gccccgcatg aatcattgta 50
 gtcaatcatt ttccagtctc cagccgctca gttgtgatca agggacacgt 100
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctccagagacc cccccgcag tatctctcc ttatagttgt gtataaggtt 350
 ctgcgaacct tgggattaat ctgtctcact gcctactttg tgatcaacc 400
 tttcagccca ttagcacctg agccagtgtc ttctggagct cacacctggc 450
 gctcactcat ccatcacatt aggcgtgatg ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttctctcg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctggtggac aaacgactgt gacgagaatg 600
 agtcagagcc cattctgcc aactgcactg gctgtgccca gaaacacctg 650
 aaggtgatgc tcttggaaga cgccccaaag aaatttgaga ggctccatcc 700
 actggtgatc aagacgggaa agcccctgtt ggaggagag attcagcatt 750
 ttttgtgcc gtaccctgag gcgacagaag gcttctctga aggggttttc 800
 gccaaagtgt ggcgctgctt tctgagcgg tggttcccat ttccttatcc 850
 atggaggaga cctctgaaca gatcacaat gttacgtgag ctttttctcg 900
 ttttactca cctgccattt ccaaaagatg cctotttaa caagtgtcc 950
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
 cctatttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtgcg aagacattgt cagtctgtgg ccattgccaat agagccaggg 1100
 gatatcggt atgtcgacac caccactgg aaggtctacg ttatagccag 1150

aggggtccag cctttggtca tctgcatgg aaccgctttc tcagaactgt 1200
 aggaataga actgtgcaca ggaacagctt ccagagccga aaaccaggtt 1250
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser
 1 5 10 15
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met
 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
 260 265 270
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
 275 280 285
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys
 290 295 300
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp
 305 310 315
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala
 320 325 330
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser
 335 340 345
 Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
 ccacggtgtc cggttcttcgc ccggcggcag ctgtcccca ggccggaggga 50
 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150
 agctcagaat aggaaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300
 aaaattttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400
 ttaattctgc tcaactgcta ctttgtgatt caacctttca gccatttagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacgcgtc gccccacgcg tccggctgaa cacctcttct ttggagtcag 50
 ccactgatga ggcaggggtcc ccacttgtag ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgccatgag ccgctggggc tgcagtgggg actgccctcc ctgccaccca 200
 ccaatggcag cccacacctc tttgaagact tccaggcttt ttgtgccaca 250

ccggaatggc gccacttcat cgacaaacag gtacagccaa ccattgtccca 300
 gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400
 gagcgcgccc agagtgcgtc ggccctccag gagctggtgc tggaaacctgc 450
 gcagaggcgg gcgcgcctgg agggggtacg ctacacggca gtgctgaagc 500
 agcaggcaac gcagcactcc atggccctgc tgcactgggg ggctgtgtgg 550
 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg acaactcccat 600
 cccccgctgg aaactgtcca gcgccgagac atattcacgc atgcgtctga 650
 agctggtgcc caaccatcac ttcgacctc acctggaagc cagcgctctc 700
 cgagacaatc tgggtgaggt tccctgaca cccaccgagg aggcctcact 750
 gcctctggca gtgaccaaag aggccaaagt gaggacccca cccgagtgc 800
 tgcaggagga ccagctcggc gaggacgagc tggctgagct ggagacccc 850
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgctgtcggc 900
 cgagtgccag ctggtgacgg tagtgccgt ggtccaggcg ctgctggagg 950
 tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgcgtggaa 1000
 accgaggagg gcacgggcta tgattccgg cgcacctgg ccagctgcgc 1050
 tgaggtccac ctgcggcggt tcaacctgcg ccgttcagca cttgagctct 1100
 tctttatcga tcaggccaac tacttctca acttcccatg caaggtgggc 1150
 acgacccagc tctcatctcc tagccagact ccgagacccc agcctggccc 1200
 catccccccc cataccaggc tacggaacca ggtgtactcg tggctcctgc 1250
 gcctacggcc cccctctcaa ggctacctaa gcagccgctc ccccgaggag 1300
 atgtcgctg cctcaggcct taccagaaaa tgggtacagc gtgagatata 1350
 caacttcagc tacttgatgc aactcaacac cattgcgggg cggaacctaca 1400
 atgacctgtc tcagtacct gtgttccctt gggtcctgca ggactacgtg 1450
 tccccacccc tggacctcag caaccagcc gtcttcggcg acctgtctaa 1500
 gcccatcggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550
 atgaaagctt tgaggacca gcagggacca ttgacaagtt ccaactatggc 1600
 acccaactact ccaatgcagc aggcgtgatg cactacctca tcgcgtggga 1650
 gcccttacc tccctgcacg tccagtgca aagtggccgc tttgactgct 1700
 ccgaccggca gttccactcg gtggcgagc cctggcagcg acgcctggag 1750
 agccctgcgc atgtgaagga gctcatccc gaattctct acttctctga 1800
 ctctctggag aaccagaacg gttttgacct gggctgtctc cagctgacca 1850

acgagaaggt aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900
 gacttcatcc agcagcaccg ccaggctctg gagtcggagt atgtgtctcg 1950
 acacotacac gaggtagatg acctcatctt tggtacaag cagcgggggg 2000
 cagccgcgga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050
 gctgtagacc tggaccatgt gacagatgag cgggaacgga aggcctctgga 2100
 gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150
 cacatccaac tcggctctca gctgaggaag cagcccatcg ccttgcaacg 2200
 ctggacacta actcacctag catcttcag cacctggacg aactcaaggc 2250
 attcttgcga gaggtgactg tgagtgccag tgggctgctg ggcaccacca 2300
 gctggttgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350
 gacccacca tgggcagcca caagacgcag cgaactgctga gtggcccggtg 2400
 ggtgccaggc agtgggtgtga gtggacaagc actggcagtg gccccggatg 2450
 gaaagctgct attcagcggg ggccactggg atggcagcct gcgggtgact 2500
 gcactacccc gtggcaagct gttgagccag ctgagctgcc accttgatgt 2550
 agtaacctgc cttgcactgg acacctgtgg catctacctc atctcaggct 2600
 cccgggacac cacgtgcatg gtgtggcggc tcctgcatca ggggtgtctg 2650
 tcagtagggc tggcaccaaa gccctgtgcag gtctgtgatg ggcatggggc 2700
 tgcagtgcag tgtgtggcca tcagcactga acttgacatg gctgtgtctg 2750
 gatctgagga tggaaactgt atcatacaca ctgtacgccc cggacagttt 2800
 gtacggcac tacggcctct gggtgccaca ttccctggac ctattttcca 2850
 cctggcattg gggccgaag gccagattgt ggtacagagc tcagcgtggg 2900
 aacgtcctgg gggccaggtc acctactcct tgcacctgta ttcagtcaat 2950
 ggggaagtgc gggcttcaact gccoctggca gagcagccta cagccctgac 3000
 ggtgacagag gactttgtgt tgctggggcac cgcctcagtc gccctgcaca 3050
 tcctccaact aaacacactg ctcccgccgc cgcctccctt gcccatgaag 3100
 gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgctggt 3150
 gggcctggag gatggcaagc tcatcgtggt ggtcgcgggg cagccctctg 3200
 aggtgcgcag cagccagttc gcgcggaagc tgtggcggtc ctgcggcgcc 3250
 atctccaggg tgtcctcggg agagacggaa tacaacccta ctgagggcgcg 3300
 ctgaacctgg ccagtcgggc tgcctgggcc ccgcccccgg caggcctggc 3350
 ccgggagggc ccgccagaa gtcggcggga acaccccggg gtgggcagcc 3400
 caggggggtga gcggggccca cctgcccag ctcagggtt gcggggcgat 3450

gttaccacct cagggattgg cgggcggaag tcccggccct cgccggctga 3500

ggggccgcc tggggccag cactggcgtc t 3531

<210> 33

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 33

Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu
1 5 10 15

Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
20 25 30

Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
35 40 45

Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
50 55 60

Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
65 70 75

Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
80 85 90

Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
95 100 105

Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
110 115 120

Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
125 130 135

Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
140 145 150

Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
155 160 165

Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
170 175 180

Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
185 190 195

Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
200 205 210

Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
215 220 225

Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
230 235 240

Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
245 250 255

His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	275	280
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	290	300
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	305	315
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	320	330
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	335	345
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	350	360
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	365	375
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	380	390
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	395	405
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	410	420
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	425	435
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	440	450
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	455	465
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	470	480
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	485	495
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	500	510
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	515	525
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	530	540
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	545	555
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	560	570
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	575	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	
				590					595					600	
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	
				605					610					615	
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	
				620					625					630	
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	
				635					640					645	
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	
				650					655					660	
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	
				665					670					675	
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	
				680					685					690	
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	
				695					700					705	
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	
				710					715					720	
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	
				725					730					735	
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	
				740					745					750	
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	
				755					760					765	
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	
				770					775					780	
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	
				785					790					795	
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	
				800					805					810	
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	
				815					820					825	
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	
				830					835					840	
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	
				845					850					855	
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	
				860					865					870	
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	
				875					880					885	
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	
				890					895					900	

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln
905 910 915

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg
995 1000

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact acccctgtgc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50

atcatgcaac cccacggccc accttgtgaa ctctctgtgc ccagggtgtg 100

tgtgcgtctt ccagggtctac tcatccaaag gcctaatacca acgttctgtc 150

ttcaatctgc aaatctatgg ggtcctctggg ctcttcttga ccttaactgt 200

ggtactggcc ctgggcgaat gcgtctctgc tggagccttt gcctctctct 250

actgggcctt ccacaagccc caggacatcc ctaccttccc cttaactctct 300

gccttcatcc gcacactccg ttaccacact gggtcattgg catttggagc 350

cctcatctct acccttgtgc agatagcccg ggtcatcttg gagtatattg 400

accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450

tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttctctaa 500

ccgcaatgca tacatcatga tcgccatcta cgggaagaat ttctgtgtct 550

cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtgggtc 600

gtcctggaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggc gtgggggtcc tgtccttctt tttttctcc ggtcgcatcc 700
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacgccca gcggcttctt 800
 cagcgttttc ggcattgtgt tggacacgct cttcctctgc ttcttggaag 850
 acctggagcg gaacaacggc tccctggacc ggcctacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgccoc cggacaacaa 950
 gaagaggaag aagtgcacgc tccggccctg atccaggact gcacccacc 1000
 cccaccgtcc agccatccaa cctcacttcg ccttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100
 acactttgag aggctgaggc gggcgatca cctgagtcag gagttcgaga 1150
 ccagcctggc caacatgggt aaacctcctg ctctattaaa aatacaaaaa 1200
 ttagccgaga gtggtggcat gcacctgtca tcccagctac tcggggaggt 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
 gatcgcccca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaaacaa acaaaaagat tttattaaag atattttggt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile
1				5					10					15
Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
			20						25					30
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
			35						40					45
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
			50						55					60
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
			65					70						75
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
			80					85						90
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
			95					100						105
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
			110					115						120
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
			125					130						135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	
				140					145					150	
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	
				155					160					165	
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	
				170					175					180	
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	
				185					190					195	
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	
				200					205					210	
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	
				215					220					225	
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	
				230					235					240	
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	
				245					250					255	
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	
				260					265					270	
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	
				275					280					285	
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	
				290					295					300	
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	
				305					310					315	
Asn	Lys	Lys	Arg	Lys	Lys										
				320											

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 37
 tcgtgccacg gggctgatgt gc 22

 <210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 38
 gtctttaccc agccccggga tgcg 24

 <210> 39
 <211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggctcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagttcttgac cgccgcggg ctcttggtac ctcagcgca ggcaggcg 50
tcggccgcc gtggctatgt tcgtgtccga ttccgcaaa gagttctacg 100
agggtgtcca gagccagagg gtcctctctc tcgtggcctc ggacgtgatg 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttcacgt gtgaccacgt 200
gcaatatacg ctggttccag ttctgtgggt gcaagaactt gaaactgcac 250
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300
gctaattgag acctattgga tattcttcaa cctgatgaag acactatatt 350
ctttgtgtgt gactcccata ggccagtcac tgctgtcaat gtatacaacg 400
ataccagat caaattactc attaaacaag atgatgacct tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcgagg agagtgggag 600
gcccgagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
gacatcgtca gccatggtga tgtttgagct ggcttgatg ctgtccaagg 700
acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttccgccc acaaccagg gaacgaggat gaggagaaca 850
cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgcctg 900
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggtctc 1000
aggagttcct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc cttgaaggag aatttgcggg aaatgattga 1100
agagctctga aataaatttg ggatgaagga catgcgcgtg cagactttca 1150
gcattcattt tgggttcaag cacaagtttc tgccagcgca cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct caggacaga 1250
 tcacttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccagaagc agctgcgagc caccagcag 1350
 accattgcc gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245	250	255
Asn Glu Asp Glu	Glu Asn Thr Leu Ser	Val Asp Cys Thr Arg Ile
260		265
Ser Phe Glu Tyr	Asp Leu Arg Leu Val	Leu Tyr Gln His Trp Ser
275		280
Leu His Asp Ser	Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg Phe
290		295
Lys Leu Trp Ser	Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu
305		310
Ala Asp Met Gly	Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln
320		325
Ala Met Asp Ile	Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu
335		340
Glu Ser Ala Asn	Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr
350		355
Phe Ser Ile His	Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp
365		370
Val Val Phe Ala	Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp
380		385
Gly Ser Gly Thr	Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser
395		400
Arg Ser Asn Leu	Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys
410		415
Lys Gln Leu Arg	Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys
425		430
Thr Asn Leu Val	Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu
440		445
Met Glu Gly Thr	Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser
455		460
Leu Ser Leu Leu	Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser
470		475
Thr Lys Asn Arg	Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala
485		490
Pro Leu Ser Met	Glu His Gly Thr Val	Thr Val Val Gly Ile Pro
500		505
Pro Glu Thr Asp	Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala
515		520
Phe Glu Lys Ala	Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn
530		535
His Phe Asp Leu	Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser
545		550
Lys Phe Leu Asp	Ala Leu Ile Ser Leu Leu Ser	

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
 gtacctcagc gcgagcgcca ggcgtccggc cgcctgggt atgntcgtgt 50
 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgctgca agatccttca 150
 ggccttgttc cagtgtagcc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaatt gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
 caggaaacct ctctttgggt ctggattggg acccctttcc agtaccattt 50
 tttctagtga accacgaag gacgatacca gaaaacaccc tcaacccaaa 100
 ggaaatagac tacagcccca attggctgac tttggctata gaaaaagaa 150
 aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200
 gagtcaagaa acccccccct cttgagctat ttacagcttt taacaattga 250
 gtaaagtacg ctccgggtcac catggtgaca gccgccctgg gtcccgtctg 300
 ggcagcgctc ctgctctttc tctgatgtg tgagatccgt atgggtggagc 350
 tcacctttga cagagctgtg gccacgggct gccaacgggt ctgtgactct 400
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
 cccccacgcc ctgccctgaga tcagacccta catataatc accatcctga 500
 aggggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggg 550
 aggggagggt cccaagggga gcctggccct cagggcagca agggtgacaa 600
 gggggagatg ggacgccccg gcgccccgtg ccagaagcgc ttcttcgcct 650
 tctcagtggt ccgcaagacg gccctgcaca gcggcgagga cttccagacg 700
 ctgctcttcg aaagggtctt tgtgaacctt gatgggtgct ttgacatggc 750
 gaccggccag tttgctgctc cctgcctgg catctacttc ttcagcctca 800
 atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
 cagaaagagg ctgtcatcct gtacgcgcag ccacgcgagc gcagcatcat 900
 gcagagccag agtgtgatgc tggacctggc ctacggggac cgcctctggg 950
 tgccgctctt caagcgccag gcgcgagaag ccatctacag caacgacttc 1000
 gacacctaca tcaccttcag cgccacctc atcaaggccg aggacgactg 1050
 agggcctctg ggccaccctc ccggctggag agctcagggt ctggtccgt 1100
 cccctgcagg gctcagttg cactgctgtg aagcaggaag gccagggag 1150
 tccccgggga cctggcatc tggggagacc ctgcttctat cttgctgcc 1200
 atcatccctc ccagcctatt tctgctcctc tcttctctct tggacctatt 1250
 ttaagaagct tgctaacct aatattctag aactttccca gcctcgtagc 1300
 ccagcacttc tcaaaacttg aatgcatgc gaatcaccg gggttcgtgt 1350
 taaatgcaga ttctgactca gcaggtctga gtgggtccag gattctgtgt 1400
 ttctcatatg ttctgggtg atgctgatgg ggtcagtcta tgaaccacac 1450

tggagcaacc aggttctagg actttctcaa tattctagta ctttctgaac 1500
 attctggaat cctcccaca ttctagaatt ctcccaacat tttttttct 1550
 tgagacagag tcttgctctg ttgccaggc tagagtgcag tggtgcaatc 1600
 tcagttcact gcaacctctg cctcccggt tcaagcgatt cttctgcctc 1650
 agcctcccta gtggctggga ttacaggcgc ctgctaccat gcctggctaa 1700
 tttttgtatt tttagtagag atgggggttc accatattgg ccaggctggt 1750
 cttgaactcc tgacttcagg tgaccacccc gcctggcct ctcaaaatgc 1800
 tgggattaca ggtgtgagcc accgtgcctg gccaatcca acattcttaa 1850
 attctctcat cctccaggg ctcccgtgc tatgttctct ttacccttc 1900
 cccctcttct cttgctcagg cctgcaccac tgcagccacc gtctatttat 1950
 tcattcatta aacctgagc actcactctg tgctgggtcc cgggaagggt 2000
 gagggggtca gacacaggcc ctgccctgc cctcagtgac tggccagtc 2050
 agcccaggcg gggagagatg tgtacatagg ttttaagca gaccagagc 2100
 tcatgggggc ctgtgttctg ggtgttcagg tgctgctggt cctccattac 2150
 ccaactgtcc ccaaggctgg tgggacgggg tcccggtgac aggggcaggt 2200
 atctccttcc cgttctctat ccactgccc agtgcctac gtacagcaa 2250
 acccoagggg gccttgcca ggtcaagggt tctgtgagga gaggaccag 2300
 gagtgtgggg gcatttgggg ggtgaagtgg ccccgaaga atggaaccca 2350
 caccatagc tctcccaca gctgatacgg catcctgcga gaagacctgc 2400
 cctctcact gggatccct tctgcctcc tccagggtct ctgccaggc 2450
 cttgctcagt cccttcacc aaagtctct gaacttccgt tcccacagg 2500
 cctccagctg ccctcagaca ctgatgtctg tcccagggt ctctctgcc 2550
 ctcatgccc tctcacggc ccagtgcctc gactctccag gctttatcaa 2600
 ggtgctaaag ccgggtggg cagctcctg tctcagagcc ctctccggc 2650
 ctggtgctgc ctttacaac acctgcagga gaaggccac ggaagcccca 2700
 ggtcttagag ccctcagcag gtctggggag ctagagcaaa ggaggacct 2750
 caggccttc gtttcttctt ccagggtggg gtggcctggt gtccccctag 2800
 ccttcaaac ccagggtgcc tgccttctc ccagaggga ggcgcctcc 2850
 gccattggt gctcatgcag actctggggc tgagtgccc cgggggtga 2900
 tctctggtg tcacagccga gggagcgtg gctccatggc cagatgacgg 2950
 aaacagggtg tgaccaagt ccaggaagac ctgtgctata aaccacctg 3000
 cctgatcctg ccctgcctg acccgccac gcctgcctg ccagcatgat 3050

taaagaatgc tgtctcctct tggaaaaaaa aaaaaaaaaa 3089

<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

<221> Signal Peptide

<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> Clq Domain Proteins

<222> 144-178, 78-111, 84-117

<223> Clq Domain Proteins

<400> 47

Met	Val	Thr	Ala	Ala	Leu	Gly	Pro	Val	Trp	Ala	Ala	Leu	Leu	Leu
1				5					10					15
Phe	Leu	Leu	Met	Cys	Glu	Ile	Arg	Met	Val	Glu	Leu	Thr	Phe	Asp
			20						25					30
Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp
			35						40					45
Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg
			50						55					60
Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile
			65						70					75
Leu	Lys	Gly	Asp	Lys	Gly	Asp	Pro	Gly	Pro	Met	Gly	Leu	Pro	Gly
			80						85					90
Tyr	Met	Gly	Arg	Glu	Gly	Pro	Gln	Gly	Glu	Pro	Gly	Pro	Gln	Gly
			95						100					105
Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys
			110						115					120
Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu
			125						130					135
His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe
			140						145					150
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala
			155						160					165
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser
			170						175					180
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys
			185						190					195
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met

	200		205		210
Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val					
	215		220		225
Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser					
	230		235		240
Asn Asp Phe Asp Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys					
	245		250		255
Ala Glu Asp Asp					

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccaggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctactcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

<400> 51
 actcgaacgc agttgcttcg ggaccaggga cccctcggg cccgacccgc 50
 caggaaagac tgaggccgcg gcctgccccg cccggtcccc tgcgcgcgcg 100
 ccgcctcccg ggacagaaga tgtgctccag ggccctctg ctgctgccgc 150
 tgctcctgct actgcccctg gggcctgggg tgcagggtcg cccatccggc 200
 tgccagtgcg gccagccaca gacagtcttc tgcaactgccc gccaggggag 250

cacggtgccc cgagacgtgc caccgcacac ggtggggctg tacgtctttg 300
 agaacggcat caccatgctc gacgcaggca gctttgcccg cctgccggcg 350
 ctgcagctcc tggacctgctc acagaaccag atcgccagcc tgcccagcgg 400
 ggtcttcacg ccactcgcca acctcagcaa cctggacctg acggccaaca 450
 ggctgcatga aatcaccaat gagaccttcc gtggcctgcg gcgcctcgag 500
 cgctctaccc tgggcaagaa ccgcatccgc cacatccagc ctgggtgcctt 550
 cgacacgctc gaccgcctcc tggagctcaa gctgcaggac aacgagctgc 600
 gggcactgcc cccgctgcgc ctgccccgcc tgctgtctgt ggacctcagc 650
 cacaacagcc tcttggccct ggagcccggc atcctggaca ctgccaacgt 700
 ggaggcgctg cggctggctg gtctggggct gcagcagctg gacgagggcg 750
 tcttcagcgg cttgcgcaac ctccacgacc tggatgtgtc cgacaaccag 800
 ctggagcgag tgccacctgt gatccgaggc ctccggggcc tgacgcgcct 850
 gcggctggcc ggcaacaccc gcattgccca gctgcggccc gaggacctgg 900
 ccggcctggc tgccctgcag gactgtgatg tgagcaacct aagcctgcag 950
 gccctgctg gcgacctctc gggcctcttc cccgcctgct ggctgtctggc 1000
 agctgcgcgc aaccctctca actgcgtgtg ccccttgagc tggatttgccc 1050
 cctgggtgct cgagagccac gtcacactgg ccagccctga ggagacgcgc 1100
 tgccacttcc cgccaagaa cgctggccgg ctgctcctgg agcttgacta 1150
 cgccgacttt ggctgcccag ccaccaccac cacagccaca gtgcccacca 1200
 cgaggccctt ggtgcgggag cccacagcct tgtcttctag cttggctcct 1250
 acctggctta gcccacagc gccggccact gaggccccc gcccgcctc 1300
 cactgcccga ccgactgtag ggctgtccc ccagccccag gactgcccac 1350
 cgtccacctg cctcaatggg ggcacatgcc acctggggac acggcacacc 1400
 ctggcgtgct tgtgcccga aggtctcagc ggctgtact gtgagagcca 1450
 gatggggcag gggcacggc ccagccctac accagtcacg ccgaggccac 1500
 cacggtccct gaccctgggc atcgagccgg tgagccccc ctccctgcgc 1550
 gtggggctgc agcgctacct ccagggggag tccgtgcagc tcaggagcct 1600
 ccgtctcacc tatcgcaacc tatcgggccc tgataagcgg ctggtagcgc 1650
 tgcgactgcc tgcctcgctc gctgagtaca cggtaaccca gctgcggccc 1700
 aacggcaactt actccgtctg tgtcatgcct ttggggcccg ggcgggtgcc 1750
 ggaggcgag gaggcctgcg gggaggccca tacaccccca gccgtccact 1800
 ccaaccacgc ccagtcacc caggcccgcg agggcaacct gcgcctctc 1850

attgcgcccg ccttgccgc ggtgctcctg gccgcgctgg ctgcggtggg 1900
ggcagcctac tgtgtgcggc gggggcgggc catggcagca gcggctcagg 1950
acaaaggcca ggtggggcca ggggctgggc ccttggaact ggaggagtg 2000
aaggtccctc tggagccagg cccgaaggca acagaggcgg gtggagaggg 2050
cctgccccagc gggctctgagt gtgaggtgcc actcatgggc ttcccagggc 2100
ctggcctcca gtcacccctc cacgcaaagc cctacatcta agccagagag 2150
agacaggcca gctggggcgc ggctctcagc cagttagatg gccagccccc 2200
tcctgtctgc acaccacgta agttctcagt cccaacctcg gggatgtgtg 2250
cagacagggc tgtgtgacca cagctgggcc ctgttccctc tggacctcgg 2300
tctcctcatc tgtgagatgc tgtggcccag ctgacgagcc ctaacgtccc 2350
cagaaccgag tgcctatgag gacagtgtcc gccctgccct ccgcaacgtg 2400
cagtccctgg gcacggcggg cctgcccatt gtctggtaac gcattgcctg 2450
gtctctgtgg gctctccac tccaggcggg cctggggggc cagtgaagga 2500
agctcccgga aagagcagag ggagagcggg taggcggctg tgtactcta 2550
gtcttgccc cagggaagca aggaacaaaa gaaactggaa aggaagatgc 2600
tttaggaaca tgttttgctt ttttaaaata tatatatta taagagatcc 2650
tttccattt attctgggaa gatgttttc aaactcagag acaaggactt 2700
tggtttttgt aagacaaacg atgatatgaa ggccttttgt aagaaaaaat 2750
aaaagatgaa gtgtgaaa 2768

<210> 52
<211> 673
<212> PRT
<213> Homo sapiens

<400> 52
Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu
1 5 10 15
Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
20 25 30
Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
35 40 45
Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
50 55 60
Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
65 70 75
Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
80 85 90
Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

	95	100	105
Asp Leu Thr Ala	Asn Arg Leu His Glu	Ile Thr Asn Glu Thr Phe	
	110	115	120
Arg Gly Leu Arg	Arg Leu Glu Arg Leu Tyr	Leu Gly Lys Asn Arg	
	125	130	135
Ile Arg His Ile	Gln Pro Gly Ala Phe	Asp Thr Leu Asp Arg Leu	
	140	145	150
Leu Glu Leu Lys	Leu Gln Asp Asn Glu	Leu Arg Ala Leu Pro Pro	
	155	160	165
Leu Arg Leu Pro	Arg Leu Leu Leu Leu	Asp Leu Ser His Asn Ser	
	170	175	180
Leu Leu Ala Leu	Glu Pro Gly Ile Leu	Asp Thr Ala Asn Val Glu	
	185	190	195
Ala Leu Arg Leu	Ala Gly Leu Gly Leu	Gln Gln Leu Asp Glu Gly	
	200	205	210
Leu Phe Ser Arg	Leu Arg Asn Leu His	Asp Leu Asp Val Ser Asp	
	215	220	225
Asn Gln Leu Glu	Arg Val Pro Pro Val	Ile Arg Gly Leu Arg Gly	
	230	235	240
Leu Thr Arg Leu	Arg Leu Ala Gly Asn	Thr Arg Ile Ala Gln Leu	
	245	250	255
Arg Pro Glu Asp	Leu Ala Gly Leu Ala	Ala Leu Gln Glu Leu Asp	
	260	265	270
Val Ser Asn Leu	Ser Leu Gln Ala Leu	Pro Gly Asp Leu Ser Gly	
	275	280	285
Leu Phe Pro Arg	Leu Arg Leu Leu Ala	Ala Ala Arg Asn Pro Phe	
	290	295	300
Asn Cys Val Cys	Pro Leu Ser Trp Phe	Gly Pro Trp Val Arg Glu	
	305	310	315
Ser His Val Thr	Leu Ala Ser Pro Glu	Glu Thr Arg Cys His Phe	
	320	325	330
Pro Pro Lys Asn	Ala Gly Arg Leu Leu	Leu Glu Leu Asp Tyr Ala	
	335	340	345
Asp Phe Gly Cys	Pro Ala Thr Thr Thr	Thr Ala Thr Val Pro Thr	
	350	355	360
Thr Arg Pro Val	Val Arg Glu Pro Thr	Ala Leu Ser Ser Ser Leu	
	365	370	375
Ala Pro Thr Trp	Leu Ser Pro Thr Ala	Pro Ala Thr Glu Ala Pro	
	380	385	390
Ser Pro Pro Ser	Thr Ala Pro Pro Thr	Val Gly Pro Val Pro Gln	
	395	400	405
Pro Gln Asp Cys	Pro Pro Ser Thr Cys	Leu Asn Gly Gly Thr Cys	

	410		415		420
His Leu Gly Thr	Arg His His Leu Ala Cys	Leu Cys Pro Glu Gly			
	425		430		435
Phe Thr Gly Leu Tyr Cys Glu Ser Gln	Met Gly Gln Gly Thr Arg				
	440		445		450
Pro Ser Pro Thr Pro Val Thr Pro Arg	Pro Pro Arg Ser Leu Thr				
	455		460		465
Leu Gly Ile Glu Pro Val Ser Pro Thr	Ser Leu Arg Val Gly Leu				
	470		475		480
Gln Arg Tyr Leu Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg				
	485		490		495
Leu Thr Tyr Arg Asn Leu Ser Gly Pro	Asp Lys Arg Leu Val Thr				
	500		505		510
Leu Arg Leu Pro Ala Ser Leu Ala Glu	Tyr Thr Val Thr Gln Leu				
	515		520		525
Arg Pro Asn Ala Thr Tyr Ser Val Cys	Val Met Pro Leu Gly Pro				
	530		535		540
Gly Arg Val Pro Glu Gly Glu Glu Ala	Cys Gly Glu Ala His Thr				
	545		550		555
Pro Pro Ala Val His Ser Asn His Ala	Pro Val Thr Gln Ala Arg				
	560		565		570
Glu Gly Asn Leu Pro Leu Leu Ile Ala	Pro Ala Leu Ala Ala Val				
	575		580		585
Leu Leu Ala Ala Leu Ala Ala Val Gly	Ala Ala Tyr Cys Val Arg				
	590		595		600
Arg Gly Arg Ala Met Ala Ala Ala Ala	Gln Asp Lys Gly Gln Val				
	605		610		615
Gly Pro Gly Ala Gly Pro Leu Glu Leu	Glu Gly Val Lys Val Pro				
	620		625		630
Leu Glu Pro Gly Pro Lys Ala Thr Glu	Gly Gly Gly Glu Ala Leu				
	635		640		645
Pro Ser Gly Ser Glu Cys Glu Val Pro	Leu Met Gly Phe Pro Gly				
	650		655		660
Pro Gly Leu Gln Ser Pro Leu His Ala	Lys Pro Tyr Ile				
	665		670		

<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tcttcagccg cttgcgcaac ctc 23

<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
ttgctcacat ccagctcctg cagg 24

<210> 55
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
tggatgttgt ccagacaacc agctggagct gtatccgagg c 41

<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 56
gaatcatcca cgcacctgca gctctgctga gagagtgcaa gccgtggggg 50
ttttgagctc atcttcatca ttcatatgag gaaataagtg gtaaaatcct 100
tggaaataca atgagactca tcagaaacat ttacataatt tgtagtattg 150
ttatgacagc agaggggtgat gctccagagc tgccagaaga aagggaactg 200
atgaccaact gctccaacat gtctctaaga aaggttcccg cagacttgac 250
cccagccaca acgacaactgg atttatccta taacctcctt tttcaactcc 300
agagttcaga ttttcattct gtctccaaac tgagagtttt gattctatgc 350
cataacagaa ttcaacagct ggatctcaaa acctttgaat tcaacaagga 400
gttaagatat ttagatttgt ctaataacag actgaagagt gtaacttggt 450
atttactggc aggtctcagg tatttagatc tttcttttaa tgactttgac 500
accatgccta tctgtgagga agctggcaac atgtcacacc tggaaatcct 550
aggtttgagt ggggcaaaaa tacaaaaatc agatttccag aaaattgctc 600
atctgcactc aaatactgtc ttcttaggat tcagaactct tcctcattat 650
gaagaaggta gctgccccat cttaaacaca aaaaaactgc acattgtttt 700
accaatggac acaaatttct ggggtctttt gcgtgatgga atcaagactt 750
caaaaatatt agaaatgaca aatatagatg gcaaaagcca atttgtaagt 800
tatgaaatgc aacgaaatct tagtttagaa aatgctaaga catcggttct 850
attgcttaat aaagttgatt tactctggga cgaccttttc cttatcttac 900

aatttgtttg gcatacatca gtggaacact ttcagatccg aaatgtgact 950
tttggtggtg aggccttatct tgaccacaat tcatttgact actcaaatac 1000
tgtaatgaga actataaaat tggagcatgt acatttcaga gtgttttaca 1050
ttcaacaggg taaaatctat ttgcttttga ccaaaatgga catagaaaac 1100
ctgacaatat caaatgcaca aatgccacac atgcttttcc cgaattatcc 1150
tacgaaatcc caatatttaa attttgccaa taatatctta acagacgagt 1200
tgtttaaaag aactatccaa ctgcctcact tgaaaactct cattttgaat 1250
ggcaataaac tggagacact ttcttttaga agttgtcttg ctaacaacac 1300
acccttgga cacttgatc tgagtcaaaa tctattacaa cataaaaatg 1350
atgaaaattg ctcatggcca gaaactgtgg tcaatatgaa tctgtcatat 1400
aataaattgt ctgattctgt cttcaggtgc ttgccccaaa gtattcaaat 1450
acttgaccta aataataacc aaatccaaac tgtacctaaa gagactattc 1500
atctgatggc cttacgagaa ctaaatattg catttaattt tctaactgat 1550
ctccctggat gcagtcattt cagtagactt tcagttctga acattgaaat 1600
gaacttcatt ctacgcccac ctctggattt tgttcagagc tgccaggaag 1650
ttaaactctc aaatgcggga agaaatccat tccggtgtac ctgtgaatta 1700
aaaaatttca ttcagcttga aacatattca gaggtcatga tggttggatg 1750
gtcagattca tacacctgtg aatacccttt aaacctaaag ggaactaggt 1800
taaaagacgt tcactctcac gaattatctt gcaacacagc tctgttgatt 1850
gtcaccattg tggttattat gctagttctg gggttggctg tggccttctg 1900
ctgtctccac tttgatctgc cctgggtatct caggatgcta ggtcaatgca 1950
cacaaacatg gcacagggtt aggaaaacaa cccaagaaca actcaagaga 2000
aatgtccgat tccacgcatt tatttcatac agtgaacatg attctctgtg 2050
ggtgaagaat gaattgatcc ccaatctaga gaaggaagat ggttctatct 2100
tgatttgctt ttatgaaagc tactttgacc ctggcaaaag cattagttaa 2150
aatattgtaa gcttcattga gaaaagctat aagtccatct ttgtttttgc 2200
tcccactttt gtccagaatg agtgggtgcca ttatgaattc tactttgccc 2250
accacaatct cttccatgaa aattctgato atataattct tatcttactg 2300
gaacccattc cattctattg cattcccaco aggtatcata aactgaaaag 2350
tctctctgaa aaaaagcat acttggaatg gcccaaggat aggcgtaaat 2400
gtgggctttt ctgggcaaac cttcgagctg ctattaatgt taatgtatta 2450
gccaccagag aatgtatga actgcagaca ttcacagagt taaatgaaga 2500

gtctcgaggt tctacaatct ctctgatgag aacagattgt ctataaaatc 2550
 ccacagtcct tgggaagttg gggaccacat acactgttgg gatgtacatt 2600
 gatacaacct ttatgatggc aatttgacaa tatttattaa aataaaaaat 2650
 ggttattccc ttcatatcag ttctagaag gatttctaag aatgtatcct 2700
 atagaaacac cttcacaagt ttataagggc ttatggaaaa aggtgttcac 2750
 cccaggattg ttataatca tgaaaaatgt ggccagggtgc agtgggtcac 2800
 tcttgaatc ccagcactat gggaggccaa ggtgggtgac ccacgaggtc 2850
 aagagatgga gaccatcctg gccaacatgg tgaaaccctg tctctactaa 2900
 aaatacaaaa attagctggg cgtgatgggt cacgcctgta gtcccagcta 2950
 ctggggaggc tgaggcagga gaatcgcttg aaccggggag gtggcagttg 3000
 cagtgaagct agatcgagcc actgcactcc agcctggtga cagagcaga 3050
 ctccatctca aaaaaaagaa aaaaaaaaaa gaaaaaaatg gaaacatcc 3100
 tcatggccac aaaataaggt ctaattcaat aaattatagt acattaatgt 3150
 aatataatat tacatgccac taaaaagaat aaggtagctg tatatttcct 3200
 ggtatggaaa aaacatatta atatgttata aactattagg ttggtgcaa 3250
 actaattgtg gtttttgcca ttgaaatggc attgaaataa aagtgtaag 3300
 aaatctatac cagatgtagt aacagtgtgt tgggtctggg aggttgatt 3350
 acaggagaca ttgatttct atgttgtgta ttctataat gtttgattg 3400
 tttagaatga atctgtattt cttttataag tagaaaaaaa ataaagatag 3450
 tttttacagc ct 3462

<210> 57
 <211> 811
 <212> PRT
 <213> Homo sapiens

<400> 57

Met	Arg	Leu	Ile	Arg	Asn	Ile	Tyr	Ile	Phe	Cys	Ser	Ile	Val	Met
1				5					10					15
Thr	Ala	Glu	Gly	Asp	Ala	Pro	Glu	Leu	Pro	Glu	Glu	Arg	Glu	Leu
				20					25					30
Met	Thr	Asn	Cys	Ser	Asn	Met	Ser	Leu	Arg	Lys	Val	Pro	Ala	Asp
				35					40					45
Leu	Thr	Pro	Ala	Thr	Thr	Thr	Leu	Asp	Leu	Ser	Tyr	Asn	Leu	Leu
				50					55					60
Phe	Gln	Leu	Gln	Ser	Ser	Asp	Phe	His	Ser	Val	Ser	Lys	Leu	Arg
				65					70					75
Val	Leu	Ile	Leu	Cys	His	Asn	Arg	Ile	Gln	Gln	Leu	Asp	Leu	Lys
				80					85					90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	
				95					100					105	
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
				140					145					150	
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	
				380					385					390	
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	
				395					400					405	

Gln	Asn	Leu	Leu	Gln	His	Lys	Asn	Asp	Glu	Asn	Cys	Ser	Trp	Pro	410	415	420
Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp	425	430	435
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu	440	445	450
Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu	455	460	465
Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp	470	475	480
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile	485	490	495
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser	500	505	510
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg	515	520	525
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser	530	535	540
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr	545	550	555
Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His	560	565	570
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val	575	580	585
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His	590	595	600
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln	605	610	615
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg	620	625	630
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser	635	640	645
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp	650	655	660
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly	665	670	675
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	680	685	690
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	695	700	705
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	710	715	720

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725						730				735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
				800					805					810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgttctca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata ctggaatgg cccaaggata ggtgtaaatg 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

<400> 61
 gggggctttc ttgggcttgg ctgcttggaa cacctgcctc caaggaccgg 50
 cctcggaggg gtcgccggga aaggaggga agaaggaagg gcggggccgg 100

cccccctgcg cccgccccgc gcctctgcgc gccctgtcc gccccggccc 150
 agcccagccc agcccccgcg gccggtcaca cgcgcagcca gccggcgccc 200
 tcccgcgccc aagcgcgcgc ctctgctgtg cctgcgcccc ttgcccccgcg 250
 ccagcttctg cgcgccgagc ccgcccgcg gccccggtga ccgtgacct 300
 gccctggcg cgggcgcgag caggcatgtc ccgcccggg accgctaccc 350
 cagcgctggc cctggtgctc ctggcagtga cctggcgcg ggtcggagcc 400
 cagggcgag ccctcgagga cctgattat tacggcgag agatctggag 450
 ccgggagccc tactacgcgc gcccgagacc cgagctcgag acctctctc 500
 cgcgctgcc tgcggggccc ggggaggagt gggagcgcg ccgcaggag 550
 ccaggccgc ccaagagggc caccaagccc aagaaagctc ccaagaggga 600
 gaagtggct ccggagccgc ctccaccag taaacacag aacaaaaaag 650
 ttatgagaac caagagctct gagaaggctg ccaacgatga tcacagtgc 700
 cgtgtggccc gtgaagatgt cagagagagt tgcccacctc ttggtctgga 750
 aaccttaaaa atocacagct tcagctcca tgcctccag gtgaagcgct 800
 atggcctggg ggcacatcga gggagactca acatccagc gggcattaat 850
 gaaaaatgatt ttatgacgc agcgtggtg gcgggaagaa atgacctcca 900
 gcagtggatt gaagtggatg ctggcgccct gaccagatc actggtgtca 950
 tcaactaagg gaggaactcc ctctggctga gtgactgggt gacatcctat 1000
 aaggctcatg tgagcaatga cagccacacg tgggtcactg ttaagaatgg 1050
 atctggagac atgatattg agggaaacag tgagaaggag atccctgttc 1100
 tcaatgagct acccgcccc atggtggccc gctacatcc cataaacct 1150
 cagtctggt ttgataatg gagcatctgc atgagaatg agatcctgg 1200
 ctgccactg ccagatccta ataattatta tcaccgccg aacgagatga 1250
 ccaccactga tgacctggat ttaagcacc acaattataa ggaatgcgc 1300
 cagttgatga aagttgtgaa tgaaatgtg ccaatatca ccagaattta 1350
 caacattgga aaaagccacc agggcctgaa gctgtatgct gtggagatct 1400
 cagatcacc ttggggagcat gaagtcggtg agcccgagtt ccactacatc 1450
 gcgggggccc acggcaatga ggtgctgggc cgggagctgc tgctgctgct 1500
 ggtgcagttc gtgtgtcagg agtaactggc ccggaatgc cgcctgctcc 1550
 acctggtgga ggagacgcgc attcacgtcc tccctccct caaccccgat 1600
 ggctacgaga aggcctacga agggggtcgc gagctgggag gctggtccct 1650
 gggacgctg acccacgatg gaattgacat caacaacaac ttctctgatt 1700

taaacacgct gctctgggag gcagaggatc gacagaatgt cccagagaaa 1750
 gttccaatc actatatgac aatccctgag tggtttctgt cggaataatgc 1800
 cagcgtggct gccgagacca gagcagtcac agcctggatg gaaaaaatcc 1850
 cttttgtgct gggcggaac ctgcaggcg gcgagctggt ggtggcgat 1900
 ccctacgacc tgggtcggtc cccctggaag acgcaggaac acacccccac 1950
 ccccgatgac cactgttcc gctggctggc ctactctat gcctccacac 2000
 accgcctcat gacagacgcc cggaggaggg tgtgccacac ggaggacttc 2050
 cagaaggagg agggcactgt caatggggcc tctgggcaca cgtcgtctgg 2100
 aagtctgaac gatttcagct accttcatac aaactgcttc gaactgtcca 2150
 tctactggtg ctgtgataaa taccacatg agagccagct gcccgaggag 2200
 tgggagaata accgggaatc tctgatctgt ttcattggag aggttcattc 2250
 tggcattaaa ggcttggtga gagattcaca tggaaaagga atcccaaacg 2300
 ccattatctc cgtagaaggc attaacatg acatccgaac agccaaagat 2350
 ggggattact ggccctctc gaacctgga gactatgttg tcacagcaaa 2400
 ggccgaaggt ttcactgcat ccaccaagaa ctgtatggtt ggctatgaca 2450
 tgggggccac aaggtgtgac ttacacacta gcaaaaccaa catggccagg 2500
 atccgagaga tcatggagaa gtttgggaag cagcccgta cctgcccagc 2550
 caggcggtg aagctgcggg ggccgaagag acgacagcgt ggtgaccct 2600
 cctgggcctc tgagactcgt ctgggaccca tgcaaatata accaacctgg 2650
 tagtagctcc atagtggact cactactgt tgtttcctct gtaattcaag 2700
 aagtgcctgg aagagagggg gcattgtgag gcaggtccca aaagggaagg 2750
 ctggaggctg aggtgtttt cttttctttg ttcccattta tccaaataac 2800
 ttggacagag cagcagagaa aagctgatgg gactgagaga actcagcaag 2850
 ccaacctggg aatcagagag agaaggagaa ggaggggagc ctgtccgttc 2900
 agagcctctg gctgcataga aaaggattct ggtgcttccc ctgtttgcgt 2950
 ggagcaagg gttccacgtg catttgcaat ttgcacagct aaaattgcag 3000
 catttcccca gctgggctgt ccaaatgtt accatttgag atgctcccag 3050
 gcgtcctaag agaatccacc ctctctggcc ctgggacatt gcaagctgct 3100
 acaataaat tctgtgttct ttgacaata gcgtcattgc caagtgcaca 3150
 tcagttagcc tcttgaatct gtttagtctc ctttttcaac aaaggagtgt 3200
 gttcagaaaa ggagagagag gctgagatca ttcaggagtt tgttgggcag 3250
 caagcatgga gcttcttgca caaattctgg gtccataaac aacccccaaa 3300

gtccctgctg atccagtagc cctggagggt cccaggtag ggagagccag 3350
 aggtgcacgc ctctctgaag ggccagaaaa ttagcctgg atctctctt 3400
 ttacctgcta ggactggaaa gagccagaag tggggtggcc tgaagccctc 3450
 tctctgcttg aggtattgcc cctgtgtgga attgagtgt catgggttg 3500
 cctcatatca gcctgggagt tatttttgat atgtagaatg ccagatcttc 3550
 cagattaggc taaatgtaat gaaaacctct taggattatc tgtggagcat 3600
 cagtttggga agaattattg aattatcttg caagaaaaaa gtatgtctca 3650
 ctttttgta atgtgtgtgc ctcatggacc tgggaaaaaa gaaaaaaaaa 3700
 aataaagcaa atggttaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62

<211> 756

<212> PRT

<213> Homo sapiens

<400> 62

Met	Ser	Arg	Pro	Gly	Thr	Ala	Thr	Pro	Ala	Leu	Ala	Leu	Val	Leu	1	5	10	15
Leu	Ala	Val	Thr	Leu	Ala	Gly	Val	Gly	Ala	Gln	Gly	Ala	Ala	Leu	20	25	30	
Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro	35	40	45	
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro	50	55	60	
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu	65	70	75	
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys	80	85	90	
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Gly	Lys	His	Ser		95	100	105	
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn	110	115	120	
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser	125	130	135	
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln	140	145	150	
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg	155	160	165	
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr	170	175	180	
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile				

	185		190		195
Glu Val Asp Ala	Arg Arg Leu Thr Arg	Phe Thr Gly Val Ile Thr			
	200	205			210
Gln Gly Arg Asn Ser	Leu Trp Leu Ser Asp	Trp Val Thr Ser Tyr			
	215	220			225
Lys Val Met Val Ser	Asn Asp Ser His Thr	Trp Val Thr Val Lys			
	230	235			240
Asn Gly Ser Gly Asp	Met Ile Phe Glu Gly	Asn Ser Glu Lys Glu			
	245	250			255
Ile Pro Val Leu Asn	Glu Leu Pro Val Pro	Met Val Ala Arg Tyr			
	260	265			270
Ile Arg Ile Asn Pro	Gln Ser Trp Phe Asp	Asn Gly Ser Ile Cys			
	275	280			285
Met Arg Met Glu Ile	Leu Gly Cys Pro Leu	Pro Asp Pro Asn Asn			
	290	295			300
Tyr Tyr His Arg Arg	Asn Glu Met Thr Thr	Asp Asp Leu Asp			
	305	310			315
Phe Lys His His Asn	Tyr Lys Glu Met Arg	Gln Leu Met Lys Val			
	320	325			330
Val Asn Glu Met Cys	Pro Asn Ile Thr Arg	Ile Tyr Asn Ile Gly			
	335	340			345
Lys Ser His Gln Gly	Leu Lys Leu Tyr Ala	Val Glu Ile Ser Asp			
	350	355			360
His Pro Gly Glu His	Glu Val Gly Glu Pro	Glu Phe His Tyr Ile			
	365	370			375
Ala Gly Ala His Gly	Asn Glu Val Leu Gly	Arg Glu Leu Leu Leu			
	380	385			390
Leu Leu Val Gln Phe	Val Cys Gln Glu Tyr	Leu Ala Arg Asn Ala			
	395	400			405
Arg Ile Val His Leu	Val Glu Glu Thr Arg	Ile His Val Leu Pro			
	410	415			420
Ser Leu Asn Pro Asp	Gly Tyr Glu Lys Ala	Tyr Glu Gly Gly Ser			
	425	430			435
Glu Leu Gly Gly Trp	Ser Leu Gly Arg Trp	Thr His Asp Gly Ile			
	440	445			450
Asp Ile Asn Asn Asn	Phe Pro Asp Leu Asn	Thr Leu Leu Trp Glu			
	455	460			465
Ala Glu Asp Arg Gln	Asn Val Pro Arg Lys	Val Pro Asn His Tyr			
	470	475			480
Ile Ala Ile Pro Glu	Trp Phe Leu Ser Glu	Asn Ala Thr Val Ala			
	485	490			495
Ala Glu Thr Arg Ala	Val Ile Ala Trp Met	Glu Lys Ile Pro Phe			

	500		505		510
Val Leu Gly Gly	Asn Leu Gln Gly Gly	Glu Leu Val Val Ala Tyr			
	515		520		525
Pro Tyr Asp Leu	Val Arg Ser Pro Trp Lys	Thr Gln Glu His Thr			
	530		535		540
Pro Thr Pro Asp	Asp His Val Phe Arg Trp	Leu Ala Tyr Ser Tyr			
	545		550		555
Ala Ser Thr His	Arg Leu Met Thr Asp	Ala Arg Arg Arg Val Cys			
	560		565		570
His Thr Glu Asp	Phe Gln Lys Glu Glu Gly	Thr Val Asn Gly Ala			
	575		580		585
Ser Trp His Thr	Val Ala Gly Ser Leu Asn	Asp Phe Ser Tyr Leu			
	590		595		600
His Thr Asn Cys	Phe Glu Leu Ser Ile Tyr	Val Gly Cys Asp Lys			
	605		610		615
Tyr Pro His Glu	Ser Gln Leu Pro Glu Glu	Trp Glu Asn Asn Arg			
	620		625		630
Glu Ser Leu Ile	Val Phe Met Glu Gln Val	His Arg Gly Ile Lys			
	635		640		645
Gly Leu Val Arg	Asp Ser His Gly Lys Gly	Ile Pro Asn Ala Ile			
	650		655		660
Ile Ser Val Glu	Gly Ile Asn His Asp Ile	Arg Thr Ala Asn Asp			
	665		670		675
Gly Asp Tyr Trp	Arg Leu Leu Asn Pro Gly	Glu Tyr Val Val Thr			
	680		685		690
Ala Lys Ala Glu	Gly Phe Thr Ala Ser Thr	Lys Asn Cys Met Val			
	695		700		705
Gly Tyr Asp Met	Gly Ala Thr Arg Cys Asp	Phe Thr Leu Ser Lys			
	710		715		720
Thr Asn Met Ala	Arg Ile Arg Glu Ile Met	Glu Lys Phe Gly Lys			
	725		730		735
Gln Pro Val Ser	Leu Pro Ala Arg Arg Leu	Lys Leu Arg Gly Arg			
	740		745		750
Lys Arg Arg Gln	Arg Gly				
	755				

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctaccggt cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
ctaagaggac aagatgaggc cgggcctctc atttctccta gcccttctgt 50
tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100
cccagccccg gcttcagctc tttccaggt gttgactcca gctccagctt 150
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtcccagttg ttttccaatt tcacgggctc cgtggatgac 250
cgtgggacct gccagtgcct tgtttccctg ccagacacca cctttccctg 300
ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350
ttgagaaaaga actttctaaa gtgagggaat atgtccaatt aattagtgtg 400
tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacactg aactggactt cgagctgato aaggtagaag 500
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550
agctcagaaa ttgttgacca gctggagggtg gagataagaa atatgactct 600
cttggtagag aagcttgaga cactagacaa aaacaatgtc cttgccattc 650
gccgagaaat cgtggctctg aagaccaagc tgaagagagt tgaggcctct 700
aaagatcaaa acacccctgt cgtccaccct cctcccactc cagggaagctg 750
tggtcatggt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800
actggagagg gttttcttat ctatatggtg cttggggtag ggattactct 850
cccagcatc caaacaaggg actgtattgg gtggcggcat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950
 tattgtatat aaatgctcga gagttgcgga tcacctatgg ccaaggtagt 1000
 ggtacagcag tttaacaaa caacatgtac gtcaacatgt acaacaccgg 1050
 gaatatgtcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100
 ctctccctaa tgctgcctat aataaccgct ttctcatatg taatgttgct 1150
 tggcaagata ttgactttgc tgtggatgag aatggattgt gggttattta 1200
 ttcaactgaa gccagcactg gtaacatggt gattagtaaa ctcaatgaca 1250
 ccacacttca ggtgctaacc acttgggtata ccaagcagta taaaccatct 1300
 gcttctaacg ccttcatggt atgtgggggt ctgtatgcca ccgtactat 1350
 gaacaccaga acagaagaga ttttttacta ttatgacaca aacacaggga 1400
 aagagggcaa actagacatt gtaatgcata agatgcagga aaaagtgcag 1450
 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500
 ttacctctcg aattatgacg tttctgtctt gcagaagccc cagtaagctg 1550
 tttaggaggt agggtgaaa agaaaatggt tgttgaaaa atagtcttct 1600
 ccacttactt agatatctgc aggggtgtct aaaagtgtgt tcattttgca 1650
 gcaatgttta ggtgcatagt tctaccacac tagagatcta ggacattgt 1700
 cttgatttgg tgagttctct tgggaatcat ctgcctcttc aggcgcattt 1750
 tgcaataaag tctgtctagg gtgggattgt cagagggtcta ggggcactgt 1800
 gggcctagtg aagcctactg tgaggaggct tcaactagaag ccttaaaata 1850
 ggaattaagg aacttaaaac tcagtatggc gtctagggat tctttgtaca 1900
 ggaaatattg ccaatgact agtcctcacc catgtagcac cactaattct 1950
 tccatgcctg gaagaaacct ggggacttag ttaggtagat taatatcttg 2000
 agctcctcga gggaccaaat ctccaacttt tttttccctt cactagcacc 2050
 tggaatgatg ctttgtatgt ggcagataag taaatttggc atgcttatat 2100
 attctacatc tgtaaagtgc tgagttttat ggagagaggc ctttttatgc 2150
 attaaattgt acatggcaaa taaatcccag aaggatctgt agatgaggca 2200
 cctgcttttt cttttctctc attgtccacc ttactaaaag tcagtagaat 2250
 cttctaccto ataacttctt tccaaaggca gctcagaaga ttagaaccag 2300
 acttactaac caattccacc ccccaccaac ccccttctac tgcctacttt 2350
 aaaaaatta atagttttct atggaactga tctaagatta gaaaaattaa 2400
 tttcttttaa ttctattatg gacttttatt tacatgacta taagactata 2450
 agaaaactcg atggcagtga caaagtgcata gcattttatg ttatctaata 2500

aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcattg 2550
 aatttttggc ttgttttaag cctggaactt gtaagaaaaa gaaaatttaa 2600
 ttttttttc taggacgagc tatagaaaag ctattgagag tatctagtta 2650
 atcagtcgag tagttggaaa ccttgctggt gtatgtgatg tgcttctgtg 2700
 cttttgaatg actttatcat ctagtctttg tctatttttc ctttgatgtt 2750
 caagtccatg tctataggat tggcagttta aatgctttac tccccctttt 2800
 aaaaataatg attaaaaatg gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
 aaaa 2854

<210> 67
 <211> 510
 <212> PRT
 <213> Homo sapiens

<400> 67
 Met Arg Pro Gly Leu Ser Phe Leu Leu Ala Leu Leu Phe Phe Leu
 1 5 10 15
 Gly Gln Ala Ala Gly Asp Leu Gly Asp Val Gly Pro Pro Ile Pro
 20 25 30
 Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
 35 40 45
 Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
 50 55 60
 Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
 65 70 75
 Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
 80 85 90
 Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
 95 100 105
 Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
 110 115 120
 Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
 125 130 135
 Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
 140 145 150
 Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
 155 160 165
 Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
 170 175 180
 Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
 185 190 195
 Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
 200 205 210

Ala Ile Arg Arg	Glu Ile Val Ala Leu Lys Thr Lys Leu Lys Glu	215	220
Cys Glu Ala Ser	Lys Asp Gln Asn Thr Pro Val Val His Pro Pro	230	240
Pro Thr Pro Gly	Ser Cys Gly His Gly Gly Val Val Asn Ile Ser	245	255
Lys Pro Ser Val	Val Gln Leu Asn Trp Arg Gly Phe Ser Tyr Leu	260	270
Tyr Gly Ala Trp	Gly Arg Asp Tyr Ser Pro Gln His Pro Asn Lys	275	285
Gly Leu Tyr Trp	Val Ala Pro Leu Asn Thr Asp Gly Arg Leu Leu	290	300
Glu Tyr Tyr Arg	Leu Tyr Asn Thr Leu Asp Asp Leu Leu Leu Tyr	305	315
Ile Asn Ala Arg	Glu Leu Arg Ile Thr Tyr Gly Gln Gly Ser Gly	320	330
Thr Ala Val Tyr	Asn Asn Asn Met Tyr Val Asn Met Tyr Asn Thr	335	345
Gly Asn Ile Ala	Arg Val Asn Leu Thr Thr Asn Thr Ile Ala Val	350	360
Thr Gln Thr Leu	Pro Asn Ala Ala Tyr Asn Asn Arg Phe Ser Tyr	365	375
Ala Asn Val Ala	Trp Gln Asp Ile Asp Phe Ala Val Asp Glu Asn	380	390
Gly Leu Trp Val	Ile Tyr Ser Thr Glu Ala Ser Thr Gly Asn Met	395	405
Val Ile Ser Lys	Leu Asn Asp Thr Thr Leu Gln Val Leu Asn Thr	410	420
Trp Tyr Thr Lys	Gln Tyr Lys Pro Ser Ala Ser Asn Ala Phe Met	425	435
Val Cys Gly Val	Leu Tyr Ala Thr Arg Thr Met Asn Thr Arg Thr	440	450
Glu Glu Ile Phe	Tyr Tyr Asp Thr Asn Thr Gly Lys Glu Gly	455	465
Lys Leu Asp Ile	Val Met His Lys Met Gln Glu Lys Val Gln Ser	470	480
Ile Asn Tyr Asn	Pro Phe Asp Gln Lys Leu Tyr Val Tyr Asn Asp	485	495
Gly Tyr Leu Leu	Asn Tyr Asp Leu Ser Val Leu Gln Lys Pro Gln	500	510

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

gctctgaaga ccaagctgaa agagtgtgag gcctctaaag atcaaacacc 50
cctgtcgctcc accctcctcc cactccaggg agctgtggtc atgggtggtg 100
ggtgaacatc agcaaaccgt ctgtgggtca gctcaactgg agagggtttt 150
cttatctata tgggtgcttg ggtagggatt actctcccca gcattccaaa 200
aaaggnatgt attggngggc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350
aacaacaaca tgtactgcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atgggtggtg ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctacctggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

tctcgcagat agtaataat ctcggaaag cgagaaagaa gctgtctcca 50
tcttgtctgt atccgctgct cttgtgacgt tgtggagatg gggagcgtcc 100
tggggctgtg ctccatggcg agctggatac catgtttgtg tgggaagtgcc 150
ccgtgtttgc tatgccgatg ctgtcctagt ggaacaacac ccactgtaac 200
tagattgac tatgcacttt tcttgcttgt tggagtatgt gtgacttgtg 250
taatgttgat accaggaatg gaagaacaac tgaataagat tctggattt 300
tgtgagaatg agaaagggtg tgtcccttgt aacatttttg ttggctataa 350
agctgtatat cgtttgtgct ttggtttggc tatgttctat cttcttctct 400
ctttactaat gatcaaatg aagagtagca gtgacctag agctgcagtg 450
cacaatggat tttgtttctt taaatttgct gcagcaattg caattattt 500
tggggcattc ttcattccag aaggaaacttt tacaactgtg tgggtttatg 550
taggcatggc aggtgccttt tgtttcatcc tcatacaact agtcttactt 600
attgattttg cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
agggaaactg agatgttggt atgcagcctt gttatcagct acagctctga 700
attatctgct gtcttttagt gctatogtcc tgttctttgt ctactacact 750
catccagcca gttgttcaga aaacaaggcg ttcacatggt tcaacatgct 800
cctctcggtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
cacaaccaag atctgggttg ttacagtctt cagtaattac agtctacaca 900
atgtatttga catggtcagc tatgaccaat gaaccagaaa caaattgcaa 950
cccaagtcta ctaagcataa ttggctacaa tacaacaagc actgtcccaa 1000
aggaagggca gtcagtcacg tgggtggcatg ctcaaggaat tataggacta 1050
attctctttt tgttgttgtt attttattcc agcatccgta cttcaaacaa 1100
tagtcagggt aataaactga ctctaacaag tgatgaatct acattaatag 1150
aagatgggtg agctagaagt gatggatcac tggaggatgg ggacgatgtt 1200
caccgagctg tagataatga aagggttggt gtcacttaca gttattcctt 1250
ctttcacttc atgcttttcc tggcttctact ttatatcatg atgacctta 1300
ccaactggtc cagggtatga ccctctcggt agatgaaaaa tcagtggaca 1350
gtgtgtctgg tgaaaaatct ttccagttgg attggcatcg tgctgtatgt 1400
ttggacactc gtggcaccac ttgttcttac aaatcgtgat tttgactgag 1450
tgagaactct agcatgaaag tcccactttg attattgctt atttgaanaa 1500
agatttccca acttttgtaa agttgtgtat gtttttgctt cccatgtaac 1550

ttctccagtg ttctggcatg aattagattt tactgcttgt cattttgtta 1600
 tttttacc aagtgcatg atatgtgaag tagaatgaat tgcagaggaa 1650
 agttttatga atatggtgat gagttagtaa aagtgccat tattgggctt 1700
 attctctgct ctatagttgt gaaatgaaga gtaaaaaaa atttgtttga 1750
 ctattttaaa attatattag accttaagct gttttagcaa gcattaaagc 1800
 aaatgtatgg ctgcttttg aaatatttga tgtgttgctt ggcaggatac 1850
 tgcaagaac atggtttatt ttaaaattta taaacaagtc acttaaatgc 1900
 cagttgtctg aaaaatctta taaggtttta cccttgatac ggaatttaca 1950
 caggtaggga gtgttttagt gacaatagtg taggttatgg atggagggtg 2000
 cggtaactaa ttgaataacg agtaataaat ctacttggtg tagagatggc 2050
 ctttgccaac aaagtgaact gttttggtg ttttaaacct atgaagtatg 2100
 ggttcagtgg aaatgtttg aactctgaag gatttagaca aggttttgaa 2150
 aaggataatc atgggttaga aggaagtgtt ttgaaagtca ctttgaaagt 2200
 tagttttggg ccagcacgg tagctcacc ttggtaatcc cagcacttg 2250
 ggagcttaag tgggtagatt acttgagccc aggaattcag accagcttgg 2300
 cacatggtga acctgttota taaaaataat ctggctttga gcatatgcct 2350
 gtggtccagc actgagaggc tagtgaagat tgctgagccc agagccaaag 2400
 gttgcagtga gcaagtcacg tcactgcact ctagctggca cagagtaagc 2450
 caaaaaata tatatatatt gaaatcaagg aggcaaaatt ttgacaggga 2500
 aggaagtaac tgcaaaacca ctaggcttta gtaggtactt atataaaatc 2550
 tagtccagtt ctctcattta aaaaaatgaa gacactgaaa tacagactta 2600
 aatagctcag atagctaatt aggaatttc aagttggcca ataatagcatt 2650
 tctctctgac atttaaaat aatttctatt caaaatcacat gcattattgat 2700
 ttacacctca tactgtgata attaatgtga tgtggatttc tgggtccag 2750
 catgacctat aaacaggcca gaagaatgat ggaatgtttt agaataaact 2800
 cctgcttata gtatactaca cagttcaaaa gatgtttaaa atgcttttgt 2850
 atttactgcc atgtaatga aatatataga ttattgtaac ctttcaacct 2900
 gaaaaatcaag cagtatgaga gtttagttat ttgtatgtgt cactagtgtc 2950
 taatgaagct tttaaaatct acaatttctt ctttaaaat atttattaat 3000
 gtgaatggaa tataacaatt cagcttaatt ccccaacctt attctgtgtg 3050
 tagacattgt attccacaat tttgaatggt tgtgttttac ctctaaataa 3100
 atgaattcag agaaaaaaa aaaaaa 3127

<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73
 Met Gly Ser Val Leu Gly Leu Cys Ser Met Ala Ser Trp Ile Pro
 1 5 10 15
 Cys Leu Cys Gly Ser Ala Pro Cys Leu Leu Cys Arg Cys Cys Pro
 20 25 30
 Ser Gly Asn Asn Ser Thr Val Thr Arg Leu Ile Tyr Ala Leu Phe
 35 40 45
 Leu Leu Val Gly Val Cys Val Ala Cys Val Met Leu Ile Pro Gly
 50 55 60
 Met Glu Glu Gln Leu Asn Lys Ile Pro Gly Phe Cys Glu Asn Glu
 65 70 75
 Lys Gly Val Val Pro Cys Asn Ile Leu Val Gly Tyr Lys Ala Val
 80 85 90
 Tyr Arg Leu Cys Phe Gly Leu Ala Met Phe Tyr Leu Leu Leu Ser
 95 100 105
 Leu Leu Met Ile Lys Val Lys Ser Ser Ser Asp Pro Arg Ala Ala
 110 115 120
 Val His Asn Gly Phe Trp Phe Phe Lys Phe Ala Ala Ala Ile Ala
 125 130 135
 Ile Ile Ile Gly Ala Phe Phe Ile Pro Glu Gly Thr Phe Thr Thr
 140 145 150
 Val Trp Phe Tyr Val Gly Met Ala Gly Ala Phe Cys Phe Ile Leu
 155 160 165
 Ile Gln Leu Val Leu Leu Ile Asp Phe Ala His Ser Trp Asn Glu
 170 175 180
 Ser Trp Val Glu Lys Met Glu Glu Gly Asn Ser Arg Cys Trp Tyr
 185 190 195
 Ala Ala Leu Leu Ser Ala Thr Ala Leu Asn Tyr Leu Leu Ser Leu
 200 205 210
 Val Ala Ile Val Leu Phe Phe Val Tyr Tyr Thr His Pro Ala Ser
 215 220 225
 Cys Ser Glu Asn Lys Ala Phe Ile Ser Val Asn Met Leu Leu Cys
 230 235 240
 Val Gly Ala Ser Val Met Ser Ile Leu Pro Lys Ile Gln Glu Ser
 245 250 255
 Gln Pro Arg Ser Gly Leu Leu Gln Ser Ser Val Ile Thr Val Tyr
 260 265 270
 Thr Met Tyr Leu Thr Trp Ser Ala Met Thr Asn Glu Pro Glu Thr
 275 280 285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr	
				290					295					300	
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	
				305					310					315	
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	
				320					325					330	
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	
				335					340					345	
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	
				350					355					360	
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val	
				365					370					375	
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	
				380					385					390	
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	
				395					400					405	
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	
				410					415					420	
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	
				425					430					435	
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg	
				440					445					450	
Asp Phe Asp															

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
 gcgagaaaga agctgtctcc atcttgtctg tatccgctg cttcttngga 50
 cgttgtggag atggggagcg tccctggggc tgtgctccat ggcgagctgg 100
 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataaccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaag gtgttgtccc 300
 ttgtaacatt ttgggtggct ataaagctgt atatcgtttg tgctttgggt 350
 tggtcatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaat ggatttttgt tctttaaatt 450
tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt ontggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tnatgacct 150
ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
gttgccctt gtaacatttt ggttggtat aaagctgtat atngttttgtg 300
ctttggttg gctangttct atnttcttct ctctttacta atgatcaaag 350
tgaagagtag cagtgtacct agagctgcag tgcacaatgg attttggtt 400
tttaaatgtg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50
gagatgggga ggcctccttg ggttggtctc catggcgagc tggataccat 100
gtttgtgttg aagtgcoccg tgtttgctat gccgatgctg tccatgtgga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200
agtatgtgta gotttgttaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aaggtgttgt ccottgtaac 300
attttggttg gctataaagc tgtatatcgt tttgtgcttg gtttgctat 350
gttctatctt ctctctctt tactaatgat caaagtgaag agtagcagt 400
atcctagagc tgcagtgcac aatggatttt ggttctttaa atttgcgtca 450
gcaattgcaa ttattattgg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
gctgtcctta gtggaacaa ntccaacttg taacttggat tgatctatgc 50
actttttcct tgcttgttgg agtatgtgta gctttgtgta atgttgttcc 100
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtggt gtcccccctgt aacattttttg gttgggtata aagctgtata 200
tcgtttgtgc tttggtttgg ctatgttcta tcttcttctc tctttactaa 250
tgatcaaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaaactt ttacaactgt gtggttttat gtaggcatgg 400
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatatt 450
gcacattcat ggaatgaatc gtgggttgaa aaatggaag aagggaactc 500
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
tgtcttttag tgctatcgtc ctgttctttg tctactacac tcattccagcc 600
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgcgc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 80
 aatccattgt gcactgcagc tctagg 26

 <210> 81
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 81
 gagcatgccca ccaactggact gac 23

 <210> 82
 <211> 54
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 82
 gccgatgctg tcctagtggg aacaactcca ctgtaactag attgatctat 50
 gcac 54

 <210> 83
 <211> 3906
 <212> DNA
 <213> Homo sapiens

 <400> 83
 ctcgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcgggtc 50
 gcggccggcg cggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
 cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc gggcgagtc 150
 ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
 agcgcgccgc cggggctgtc gcaactcccg cggaacattt ggctccctcc 250
 agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300
 ttccagcca agtggacctg atcgatggcc ctcctgaatt tatcacgata 350
 ttgtatttat tagcgatgcc ccttggtttg tgtgttacgc acacacacgt 400
 gcacacaagg ctctggctcg cttccctccc togtttccag ctcctggggc 450
 aatcccaaat ctgtttcaac tctccgccga gggcgagcag gagcgagagt 500
 gtgtcgaatc tgcgagtga gagggacgag ggaagagaaa caaagccaca 550
 gacgcaactt gagactccc catccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggcceccga gctcgtgtgt gtgcttgtgtg tccgcaactg 650
 tgtttccct gctgggtgga agctcggcct tctgtgtgca ccaccgcctg 700
 aaagcgaggt ttccagaggga ccgcaggaac atccgccccca acatcatcct 750
 ggtgctgacg gacgaccagg atgtggagct ggggtccatg caggtgatga 800
 acaagaccgg gcgcatcatg gagcaggggg gggcgcaact catcaacgcc 850
 ttcgtgacca caccatgtg ctgcccctca cgtctctcca tctcactg 900
 caagtacgtc cacaaccaca acacctacac caacaatgag aactgctcct 950
 cgccctcctg gcaggcacag cagcagagcc gcacctttgc cgtgtacctc 1000
 aatagcactg gctaccggac agctttcttc gggaagtatc ttaatgaata 1050
 caacggctcc tacgtgccac ccggctggaa ggagtgggtc ggactcctta 1100
 aaaactcccg cttttataac tacacgtgtg gtcggaacgg ggtgaaagag 1150
 aagcagcgct ccgactactc caaggattac ctcacagacc tcatacacia 1200
 tgacagcgtg agcttcttcc gcaagtccaa gaagatgtac ccgcacaggc 1250
 cagtcctcat ggtcatcagc catgcagccc ccacaggccc tgaggattca 1300
 gccccacaat attcagcct cttcccaaac gcatctcagc acatcacgcc 1350
 gagctacaac tacgcgccc acccggaaca aactggatc atgcgtaca 1400
 cggggcccat gaagccatc cacatggaat tcaccaacat gtcacagcg 1450
 aagcgcttgc agacctcat gtcggtggac gactccatgg agacgattta 1500
 caacatgctg gttgagacgg gcgagctgga caacacgtac atcgtatata 1550
 ccgcgacca cggttaccac atcggccagt ttggcctggt gaaaggggaa 1600
 tccatgccat atgagtttga catcagggtc ccgttctacg tgagggggccc 1650
 caacgtggaa gccggtgtgc tgaatcccca catcgtcctc aacattgacc 1700
 tggcccccac catcctggac attgcaggcc tggacatacc tgcggtatag 1750
 gacgggaaat ccatcctcaa gctgctggac acggagcggc cgtgtaatcg 1800
 gtttacttgg aaaaagaaga tgagggtctg gcgggactcc ttcttggttg 1850
 agagaggcaa gctgctacac aagagagaca atgacaaggt ggacgcccag 1900
 gaggagaact ttctgcccc agtaccagct gtgaaggacc tgtgtcagcg 1950
 tgctgagtac cagacggcgt gtgagcagct gggacagaag tggcagtgtg 2000
 tggaggacgc cagcgggaag ctgaagctgc ataagtgc aaaggcccatg 2050
 ccgctggggc gcagcagagc cctctccaac ctctgtccca agtactacgg 2100
 gcagggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc 2150
 tggccggagc ccggaaaaaa ctcttcaaga agaagtacaa ggccagctat 2200

gtccgcagtc gctccatccg ctccagtggcc atcgagggtg acggcagggt 2250
 gtaccacgta ggccctgggtg atgcccgccca gccccgaaac ctccaccaagc 2300
 ggcactggcc agggggccctc gaggaccaag atgacaagga tggtaggggac 2350
 ttccagtggca ctggaggcctc tcccgactac tcagccgcga accccattaa 2400
 agtgacacat cgggtgtaca tccctagagaa cgacacagtc cagtgtgacc 2450
 tggacctgta caagtccctg caggcctgga aagaccacaa gctgcacatc 2500
 gaccacgaga ttgaaaccct gcagaacaaa attaagaacc tgagggaagt 2550
 ccgagggtcac ctgaagaaaa agcggccgca agaattgtac tgtcacaaaa 2600
 tcagctacca caccagcac aaaggccgcc tcaagcacag aggtccagct 2650
 ctgcctcctt tcagggaagg cctgcaagag aaggacaagg tgtggctgtt 2700
 gcgaggagcag aagcgcaaga agaaactccg caagctgctc aagcgccctg 2750
 agaacaacga cagctgcagc atgccaggcc tcacgtgctt caccacgac 2800
 aaccagcact ggagagcggc gcctttcttg aactggggc ctttctgtgc 2850
 ctgcaccagc gccacaata acacgtactg gtgcatgagg accatcaatg 2900
 agactcaciaa ttctctctt tgtgaattg caactggctt cctagagtac 2950
 tttgatctca acacagacc ctaccagctg atgaatgcag tgaacacact 3000
 ggacagggat gtctcaacc agctacacgt acagctcatg gagctgagga 3050
 gctgcaaggg ttacaagcag tgtaaccccc ggaactcgaa catggacctg 3100
 gatggaggaa gctatgagca atacaggcag tttcagcgct gaaagtggcc 3150
 agaaatgaag agactctctt ccaaatcact gggacaaact tggggaaggct 3200
 ggggaaggta agaaacaaca gaggtggacc tccaaaaaca tagaggcatc 3250
 acctgactgc acaggcaatg aaaaaccatg tgggtgattt ccagcagacc 3300
 tgtgtatttg gccaggaggc ctgagaaagc aagcacgcac tctcagtaa 3350
 catgacagat tctggaggat aaccagcagg agcagagata acttcaggaa 3400
 gtccattttt gccctcgctt ttgctttgga ttataacctc ccagctgcac 3450
 aaaaatgcatt ttttctgata aaaaagtcac cactaacctt cccccagaag 3500
 ctcaaaaagg aaaacggaga gagcgagcga gagagatttc cttggaattt 3550
 tctcccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaagca 3600
 gtctgtttct aaatcctctt attcttttgg tttgtcacia agaaggaaact 3650
 aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgcagagacg 3700
 tttgacaatg agtcagtagc acaaaagaga tgacatttac ctagcactat 3750
 aaaccctggt tgctctgaa gaaactgcct tcaattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val
 1 5 10 15
 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg
 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	260	265	270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	275	280	285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	290	295	300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	305	310	315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	320	325	330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	335	340	345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	350	355	360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	365	370	375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	380	385	390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	395	400	405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	410	415	420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	425	430	435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	440	445	450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	455	460	465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	470	475	480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	485	490	495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	500	505	510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	515	520	525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	530	535	540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	545	550	555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	560	565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	575	580	585
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	590	595	600
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	605	610	615
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	620	625	630
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	635	640	645
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	650	655	660
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	665	670	675
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	680	685	690
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	695	700	705
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	710	715	720
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	725	730	735
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	740	745	750
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	755	760	765
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	770	775	780
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	785	790	795
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	800	805	810
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	815	820	825
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	830	835	840
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	845	850	855
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				860	865	

<210> 85

<211> 19

<212> DNA

<213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 85
 gaagccggct gtctgaatc 19
 <210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 86
 gccagctat ctccgag 18
 <210> 87
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 87
 aagggcctgc aagagaag 18
 <210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 88
 cactgggaca actgtggg 18
 <210> 89
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 89
 cagaggcaac gtggagag 18
 <210> 90
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 90
 aagtattgtc atacagtgtt c 21

<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcacgaggtt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctgggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
ctcaagctgc tggacacgga gcggccggtg aatcggttcc acttg 45

<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

<400> 94
aacaaggttc agtgactgag agggctgagc ggaggctgct gaaggggaga 50
aaggagttag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100
tgggcctcct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150
gtggcggttc tgctgctgct gctgctgctg gccacctgcc tttccacgg 200
acggcaggac tgtgacgtgg agaggaaccg tacagctgca gggggaacc 250
gagtcgcgcg ggcccagcct tggcccttcc ggcggcgggg ccacctggga 300
atctttcacc atcaccgtca tcctggccac gtatctcatg tgcgaatgt 350
gggcctccac caccaccacc acccccgcga caccctcac cacctccacc 400
accaccacca cccccaccg caccatcccc gccacgtcgt ctgaggctgc 450
tgtcgccggt gcctgtggac agcagctgcc cctgccctcc catctgttcc 500
caggacaaagt ggaccccatg tttccatgtg gaaggatgca tctctgggg 550
gaacgagggg aacaatagac tggggcttgc tccagctgca tttgcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgtgaagg gtttggggag tggagagcaa ggggtgctctt tcggggctgg 700
 acagcccgtc ttgtgacagt gactcccgat gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctctcatca ggctgctgca ggctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtccctttgg ttgggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr
 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
 ggcggctgct gagctgcctt gaggtgcagt gttggggatc cagagccatg 50
 tcggacctgc tactactggg cctgattggg ggctgactc tcttactgct 100
 gctgacgctg ctggcccttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggccataaag 200
 ttccacatgg ggctctatgg tgagactggg cggtctttca ctgagagctg 250
 cagcatctct cccaagctcc gctccatcgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatgccctc ccctgagctc atcgacctc accagaaatt 400
 tggcttcaag gtgttctcct tcccggcacc cagccatgtg gtgacagcca 450
 ccttccocta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500
 catctgcctc tggacaccta catcaaggag cggaagctgt gtgcctatcc 550
 tcggttgagg atctaccagg aagaccagat ccatttcagt tggccactgg 600
 caccggcagg agacttttat gtgcctgaga tgaaggagac agagtggaaa 650
 tggcgggggc ttgtggaggc cattgacacc cagtggtgat gcacaggagc 700
 tgacacaatg agtgacacga gttctgtaag cttggaagtg agccctggca 750
 gccgggagac ttcagctgcc aactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacacg agtcagggtc 850
 cagcgctcc tcttttgagg agctggactt ggagggcgag gggcccttag 900
 gggagtccg gctggacctt ggactgagc ccctggggac taccaagtgg 950
 ctctgggagc cactgcccc tgagaagggc aaggagtaac ccatggcctg 1000
 caccctctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
 ctctccagcc ctcttctcc tctctctggg ggaggagggg ttccctgagg 1100
 acctgacttc cctgctcca ggcctcttgc taagccttct cctcactgcc 1150
 ctttaggtc ccagggccag aggagccagg gactatttct tgcaccagcc 1200
 ccagggtg cgcgccctgt tgtgtctttt ttccagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97

<211> 313

<212> PRT

<213> Homo sapiens

<400> 97

Met	Ser	Asp	Leu	Leu	Leu	Gly	Leu	Ile	Gly	Gly	Leu	Thr	Leu
1				5				10					15
Leu	Leu	Leu	Leu	Thr	Leu	Leu	Ala	Phe	Ala	Gly	Tyr	Ser	Gly
				20				25					30
Leu	Ala	Gly	Val	Glu	Val	Ser	Ala	Gly	Ser	Pro	Pro	Ile	Arg
				35				40					45
Val	Thr	Val	Ala	Tyr	Lys	Phe	His	Met	Gly	Leu	Tyr	Gly	Glu
				50				55					60
Gly	Arg	Leu	Phe	Thr	Glu	Ser	Cys	Ser	Ile	Ser	Pro	Lys	Leu
				65				70					75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
 80 85 90
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
 95 100 105
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
 110 115 120
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
 125 130 135
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
 140 145 150
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
 155 160 165
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
 170 175 180
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
 185 190 195
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
 200 205 210
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
 215 220 225
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
 230 235 240
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
 245 250 255
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
 260 265 270
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
 275 280 285
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
 290 295 300
 Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
 305 310

<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 98
 ccgcgggaac gctgtcctgg ctgccgcac ccgaacagcc tgcctcgtg 50
 ccccggtccc ctgccccgcg ccagtcacg accctgcgcc cctcactcct 100
 cccgctccat ctgctgctgc tgctgctgct cagtgcggcg gtgtgccccg 150
 ctgaggctgg gctcgaaacc gaaagtccc tccggaccct ccaagtggag 200
 accctggtgg agccccaga accatgtgcc gagccccgtg cttttggaga 250

cacgcttcac atacactaca cggaagctt ggtagatgga cgtattattg 300
 acacctccct gaccagagac cctctggtta tagaacttgg ccaaaagcag 350
 gtgattccag gtctggagca gactcttctc gacatgtgtg tgggagagaa 400
 gcgaagggca atcattcctt ctacttggc ctatggaaaa cggggatttc 450
 caccatctgt cccagcggat gcagtgggtc agtatgacgt ggagctgatt 500
 gcactaatcc gagccaacta ctggctaaag ctgggtgaagg gcattttgcc 550
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
 acctatacag aaaggccaat agacccaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataaataa taaattttta 700
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 99
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu
 20 25 30
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
 35 40 45
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
 50 55 60
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
 65 70 75
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
 80 85 90
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
 95 100 105
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
 110 115 120
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
 125 130 135
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
 140 145 150
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
 155 160 165
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
 170 175 180
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys
200

<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

<400> 100
ccggggaacg tggtcctggc tgccgcaccc gaacagcctg tctcggtgcc 50
cgggtccct gccccgggcc cagtcacgac cctgcgcccc tcactcctcc 100
cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150
gaggctgggc tcgaaaccga aagtcgccgc cggaccctcc aagtggagac 200
cctggtggag cccccagaac catgtgccga gcccgctgct tttggagaca 250
cgcttcacat acactacacg ggaagcttgg tagatggagc tattattgac 300
acctccctga ccagagaccc tctggttata gaacttgcc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggaat cattccttct cacttgccct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtggtgcag tatgacgtgg agctgattgc 500
actaatcga gccaaactact ggctaaagct ggtgaaggcg attttgcctc 550
tggtagggat ggccatgggt ccaccctcct gggcctcatt gggtatcacc 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
ccgaaagtcg cgctcggacc ctccaagtgg agaccctggt ggagccccca 50
gaaccatgtg ccgagcccg cgtcttttga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
acctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggc caatcattcc 250
ttctcaactg gcctatggaa aacggggatt tccaccatct gtcccagcgg 300
atgcagtggt gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctctgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500
 agcaaaaaga aataataaat aataaat tttt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
 ctgctgcac cgggtgtctg gaggtgtgg ccgttttgtt ttcttggcta 50
 aaatcggggg agtgaggcgg gccggcgcgg cgcgacaccg ggctccggaa 100
 ccactgcacg acggggctgg actgacctga aaaaaatgct tggatttcta 150
 gagggtctga gatgctcaga atgcattgac tggggggaaa agcgaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tggtgatta 250
 tcatagatgc agctgttatt tatccacca tgaaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccctcctaa tgattaatgc 350
 agtatcgaat ggacaagtcc gaggtgatag ttacagttaa ggttgtctgg 400
 gtcaaacagg tgctcgcat tggcttttcg ttggttccat gttggccttt 450
 ggatctctga ttgcatctat gtgattctt ttggagggtt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcatcttttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600
 tggcagttaa cacatctgat ttcccacagc acaacagccc tgcattgggtt 650
 tgtttgtttt tttactgtc actcccaacc ttttgaatg ccattttcta 700
 aacttatttc tgagtgtagt ctcagcttaa agttgtgtaa tactaaaatc 750
 acgagaacac ctaaaacaac accaaaaatc tattgtggta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgcataa 850
 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaatt 900
 atggatttgt caatgtaagt atttgtcata tctgaggtcc aaaaccacaa 950
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaatgtg gtcctctctg 1000
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050
 gtggtcaaaa ttcttctcca ctataatttg tatttacttt taccaaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcttttg aggggtctccc aaggggtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggcctccctg 1200
 tgtcccttcc atgggaagggt ctccgctgtt gcctctcatt ccaagggcag 1250
 gaagatgtga ctcagocatg acacgtgggt ctggtgggat gcacagtcac 1300

tccacatcca ccaactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met	Ser	Gly	Phe	Leu	Glu	Gly	Leu	Arg	Cys	Ser	Glu	Cys	Ile	Asp
1				5				10					15	
Trp	Gly	Glu	Lys	Arg	Asn	Thr	Ile	Ala	Ser	Ile	Ala	Ala	Gly	Val
			20					25					30	
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
			35					40					45	
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
			50					55					60	
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
			65					70					75	
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
			80					85					90	
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
			95					100					105	
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
			110					115					120	
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
			125					130					135	
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
			140					145					150	
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
			155											

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

ttcttggcta aaatcggggg agtgaggcgg gccggcgcg cgcgacaccg 50
ggctccggaa ccactgcacg acggggcttg actgacctga aaaaaatgtc 100
tggatttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150
agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200
tgggtggatta tcatagatgc agctgttatt tatccacca tgaaagattt 250
caaccactca taccatgcct gtggtgttat agcaaccata gccttcctaa 300
tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagtga 350
ggttgctcgg gtcaaacagg tgctcgcatt tggcttttcg ttggtttcat 400

gttggccttt ggatctctga ttgcatctat gtggattctt tttggagggt 450
 atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
 cagaatgcct tcattctttt tggagggtctg gtttttaagt ttggc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
 tggacggacc tgaaaaaat gtttggattt nttagggnt tgagatgttc 50
 agaatgcatt actgggggaa aagcgcaaat actattgctt ccattgctgc 100
 tgggtgnta ttttttacag gctgggtgat tatcatagat gcagntgtta 150
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
 atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 250
 ccgaggtgat agttacagtg aagggtgttt gggtcaaaca ggtgctcgca 300
 tttggtttt cgttgggttc atgttggcct ttggtctctt gattgcatct 350
 atgtggattc tttttggagg ttatgttgc aaagaaaaag acatagtata 400
 ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
 tggtttttaa gtttggcgc actgaagant tatggcagt 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
 ggacaccggg ttccggacca atgcangacg ggggtggantg acctgaaaaa 50
 aatgtttgga ttttttagag gcttgagatg ntcagaatgc attgactggg 100
 ggaaaagcgc aatantattg ctttcattg ctgctggtgt actatttttt 150
 acagggtggt ggattatcat agatgcagct gttattttat ccaccatgaa 200
 agatttnaac cactcatacc atgcctgttg tgttatagca accatagcct 250
 tcctaatgat taatgcagta tcgaatggac aagtcggag tgatagttac 300
 agtgaaggtt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350
 tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

ggagggttatg ttgctaaaga aaaagacata gtataccctg gaattntcnt 450
atttttccag aatgcc 466

<210> 107
<211> 377
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356
<223> unknown base

<400> 107
tagagggctt gagatgctca gaatgcattg actgggggga aaagcgcaat 50
antattgctt ccattgntgn tgggtanta tttttttaca ggctggtgga 100
ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150
tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200
tgcagtatng aatggacaag tccgaggtga tagttacagt gaaggtgttt 250
tgggtcaaac aggtgntngc atttggcttt tngttggttt catgttggcc 300
tttggatctn tgattgcatt tatgtggatt nttttggag gttatgttgc 350
taaagnaaaa gacatagtat accctgt 377

<210> 108
<211> 552
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 12, 25, 65, 130, 437, 537
<223> unknown base

<400> 108
gggaggctgt gnccgttttg ttttnttggc taaaatcggg ggagtgaggc 50
ggcccgggcg ggcgngacac cgggttcogg gaaccattgc acgacggggt 100
ggactgacct gaaaaaaatg tttggatttn tagagggctt gagatgctca 150
gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200
tgggtgtaact ttttttacag gctggtggat tatcatagat gcagctgtta 250
tttatccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 300
atagcaacca tagccttctt aatgattaat gcagtatoga atggacaagt 350
cogaggtgat agttacagt aaggttgtct gggtcaaaaca ggtgctcgca 400
tttggctttt cgttggttct atgttggtct ttggatntct gattgcattc 450
atgtggattc tttttggagg ttatgttgc aaagaaaaa acatagtata 500
ccctggaatt gctgtatttt tccagaatgc ctcatnttt tttggagggc 550

tg 552

<210> 109

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 109

gggtggatgg tactgctgca tcc 23

<210> 110

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 110

tgttgtgctg tgggaaatca gatgtg 26

<210> 111

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 111

gtgtctggag gctgtggcgg ttttgttttc ttgggctaaa atcggg 46

<210> 112

<211> 3004

<212> DNA

<213> Homo sapiens

<400> 112

cgacgccggc gtgatgtggc ttccgctggg gctgctcctg gctgtgctgc 50

tgctggccgt cctctgcaaa gtttacttgg gactattctc tggcagctcc 100

ccgaatccct tctccgaaga tgtcaaacgg cccccagcgc ccctggtaac 150

tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200

aagtgcggga gaagctggat gtgggtggtaa ttggcagtggt ctttgggggc 250

ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcctgggtgct 300

ggaacaacat accaaggcag ggggctgctg tcataccttt ggaagaatg 350

gccttgtaatt tgacacagga atccattaca ttgggogtat ggaagagggc 400

agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450

ggctccccctg tcctctcctt ttgacatcat ggtactggaa gggcccaatg 500

gccgaaagga gtaccccatg tacagtggag agaaagccta cattcagggc 550

ctcaaggaga agtttccaca ggaggaagct atcattgaca agtatataaa 600
 gctggttaag gtggtatcca gtggagcccc tcatgccato ctgttgaaat 650
 tcttccatt gcccggtgtt cagctcctcg acaggtgtgg gctgctgact 700
 cgtttctctc cattccttca agcatccacc cagagcctgg ctgaggtcct 750
 gcagcagctg ggggcctcct ctgagctcca ggcagtactc agctacatct 800
 tccccactta cgggtgcacc cccaaccaca gtgccttttc catgcacgcc 850
 ctgctggtca accactacat gaaaggaggc ttttatcccc gagggggttc 900
 cagtgaatt gccttccaca ccatccctgt gattcagcgg gctggggcgg 950
 ctgtcctcac aaaggccact gtgcagagtg tgttgctgga ctgagctggg 1000
 aaagcctgtg gtgtcagtg gaagaagggg catgagctgg tgaacatcta 1050
 ttgccccatc gtggtctcca acgcaggact gttcaacacc tatgaacacc 1100
 tactgccggg gaacgccgcg tgcctgccag gtgtgaagca gcaactgggg 1150
 acggtgcggc ccggcttagg catgacctct gttttcatct gcctgcgagg 1200
 caccaaggaa gacctgcac tgcctgccac caactactat gtttactatg 1250
 acacggacat ggaccaggcg atggagcgct acgtctccat gccagggaa 1300
 gaggtgcgg aacacatccc tcttctcttc ttcgctttcc catcagccaa 1350
 agatccgacc tgggaggacc gattccagg ccggtccacc atgatcatgc 1400
 tcataccac tgcctacgag tgggttgagg agtggcagcg ggagctgaag 1450
 ggaaagcggg gcagtgacta tgagaccttc aaaaactcct ttgtggaagc 1500
 ctctatgtca gtggtcctga aactgttccc acagctggag ggaaggtgg 1550
 agagtgtgac tgcaggatcc ccactcacca accagttcta tctggtctgt 1600
 ccccgaggtg cctgctacgg ggtgacctat gacctgggcc gcctgcaccc 1650
 ttgtgtgatg gcctccttga gggcccagag ccccatcccc aacctctatc 1700
 tgacaggcca ggatatcttc acctgtggac tggctggggc cctgcaaggt 1750
 gccctgctgt gcagcagcgc catcctgaag cggaacttgt actcagacct 1800
 taagaatctt gattctagga tccgggcaca gaagaaaaag aattagttcc 1850
 atcaggggag agtcagagga atttgcccaa tggctggggc atctcccttg 1900
 acttaccocat aatgtctttc tgcattagtt ccttgacagt ataagcact 1950
 ctaatttggt tctgatgct gaagagaggc ctagttaaaa tcacaattcc 2000
 gaatctggg caatggaatc actgcttcca gctggggcag gtgagatctt 2050
 tacgcctttt ataacatgcc atccctacta ataggatatt gacttgata 2100
 gottgatgtc tcatgacgag cggcgctctg catccctcac ccatgcctcc 2150

taactcagtg atcaaagcga atattccatc tgtggataga acccctggca 2200
 gtgtgtgcag ctcaacctgg tgggttcagt totgtcctga ggcttctgct 2250
 ctcatctcatt tagtgctacg ctgcacagtt ctacactgtc aagggaaaag 2300
 ggagactaat gaggcttaac tcaaaacctg ggcgtgggtt tggttgccat 2350
 tccataggtt tggagagctc tagatctctt ttgtgctggg ttcagtggct 2400
 cttcaggggga caggaaatgc ctgtgtctgg ccagtgtggt tctggagctt 2450
 tggggtaaca gcaggatcca tcagtttaga ggggtcatgt cagatgatca 2500
 tatccaattc atatggaagt cccgggtctg tcttccttat catcggggtg 2550
 gcagctggtt ctcaatgtgc cagcaggggac tcagtacctg agcctcaatc 2600
 aagccttatc caccaaatac acagggaagg gtgatgcagg gaagggtgac 2650
 atcaggagtc agggcatgga ctggaagat gaatactttg ctgggctgaa 2700
 gcaggctgca gggcattcca gccaaaggca cagcagggga cagtgcaggg 2750
 aggtgtgggg taaggagggg aagtcacatc agaaaaggga aagccacgga 2800
 atgtgtgtga agcccagaaa tggcatttgc agttaattag cacatgtgag 2850
 ggtagacag gtaggtgaat gcaagctcaa ggttggaaa aatgactttt 2900
 cagttatgtc tttagtatca gacatacgaa aggtctcttt gtatgtcgtg 2950
 ttaatgtaac attaataaat ttattgattc cattgcttta aaaaaaaaaa 3000
 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
 Met Trp Leu Pro Leu Val Leu Leu Leu Ala Val Leu Leu Leu Ala
 1 5 10 15
 Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro
 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile
				110					115					120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile
				125					130					135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser
				140					145					150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys
				155					160					165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu
				170					175					180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile
				185					190					195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu
				200					205					210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys
				215					220					225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln
				230					235					240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu
				245					250					255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro
				260					265					270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr
				275					280					285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala
				290					295					300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu
				305					310					315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys
				320					325					330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile
				335					340					345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr
				350					355					360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys
				365					370					375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val
				380					385					390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser
				395					400					405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met
				410					415					420

Glu Arg Tyr Val	Ser Met Pro Arg	Glu Glu Ala Ala	Glu His Ile
425		430	435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr	Trp
440		445	450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile	Pro
455		460	465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys	Gly
470		475	480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val	Glu
485		490	495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu	Gly
500		505	510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln	Phe
515		520	525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His	Asp
530		535	540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala	Gln
545		550	555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe	Thr
560		565	570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser	Ser
575		580	585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu	Asp
590		595	600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn	
605		610	

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
 gcagcggcga ggcggcggtg gtggctgagt ccgtggtggc agaggcgaag 50
 gcgcagctc taggggttgg caccggcccc gagaggagga tgcgggtccg 100
 gatagggctg acgctgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150
 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgctggt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaaagagg ggaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaaccagc tttagccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500
tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
tacaacctat gactacaaag cagatgaaaa gtggggcttt tgtgaaactg 600
aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
caaatcggaa tgaaaaatctt taatggaagc aataagaaaa gccaaaaaag 700
agaagcatat cggatatctcc aaaaggcagc aagcatgaac cataccaaag 750
ccctggagag agtgtcatat gctcttttat ttggtgatta cttgccacag 800
aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
tcccaaggga cagactgctc ttggctttct gtatgcctct ggacttggtg 900
ttaattcaag tcaggcaaaag gctcttgtat attatacatt tggagctctt 950
gggggcaatc taatagccca catggttttg gtaagtagac tttagtggaa 1000
ggctaataat attaacatca gaagaatttg tggtttatag cgccacaac 1050
tttttcagct ttcatgatcc agatttgctt gtattaaagc caaatattca 1100
gttgaaacttc cttcaaattc ttgttaatgg atataacaca tggaaatctac 1150
atgtaaatga aagttgggtg agtcacaaat tttctttaa aatgattagt 1200
ttggctgatt gccctaaaa agagagatct gataaatgac tctttttaa 1250
ttttctctga gttgaattg tcagaatcat tttttacatt agattatcat 1300
aattttaaaa atttttctt agtttttcaa aattttgtaa atggtggcta 1350
tagaaaaaca acatgaaata ttatacaata ttttgcaaca atgccctaag 1400
aattgtttaa attcatggag ttatttgtgc agaagactc cagagagctc 1450
tactttctgt tttttacttt tcatgattgg ctgtcttccc atttattctg 1500
gtcatttatt gctagtgaac ctgtgcctgc ttccagtagt ctcattttcc 1550
ctattttgct aatttgttac tttttctttg ctaatttgga agattaactc 1600
atttttaata aaattatgtc taagattaaa aaaaaaaaaa aaaaaaaaaa 1650
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700

a 1701

<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

Met	Arg	Val	Arg	Ile	Gly	Leu	Thr	Leu	Leu	Leu	Cys	Ala	Val	Leu
1				5					10					15
Leu	Ser	Leu	Ala	Ser	Ala	Ser	Ser	Asp	Glu	Glu	Gly	Ser	Gln	Asp
			20					25					30	

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
				290					295					300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

cttcccagcc ctgtgcccc aagcacctgg agcatatagc cttgcagaac 50
 ttctacttgc ctgcctccct gccctctggcc atggcctgcc ggtgcctcag 100
 cttccttctg atggggacct tctctgcagt tcccagaca gtccctggccc 150
 agctggatgc actgctgggtc tcccaggcc aagtggctca actctcctgc 200
 acgctcagcc cccagcacgt caccatcagg gaetacgggtg tgcctcggtg 250
 ccagcagcgg gcaggcagtg cccctcgata tctcctctac taccgctcgg 300
 aggaggatca ccaccggcct gctgacatcc ccgatogatt ctggcgagcc 350
 aaggatgagg cccacaatgc ctgtgtctct accattagtc ccgtgcagcc 400
 tgaagacgac gcggattact actgctctgt tggctacggc tttagtccct 450
 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc attctctgcc 500
 ctgaccttgg gtccctttta aactttctct gagccttgct tcccctctgt 550
 aaaaatgggtt aataatattc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
 Met Ala Cys Arg Cys Leu Ser Phe Leu Leu Met Gly Thr Phe Leu
 1 5 10 15
 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

gccgccccgc ccgagaccg ggcgggggg cgcggggagg cgggatgcgg 50
 cgccgggggc ggcgatgacc ggcgagcgca cgccgggggc ccggccctga 100
 ccccgccgcc cgcccgctga gccccccgcc gaggtccgga caggccgaga 150
 tgacgcccag cccctgttg ctgctcctgc tgcgcccgt gctgctgggg 200
 gccttccac cgccggccgc cgccgaggc ccccaaaaga tggcgacaa 250
 ggtggtccca cggcaggtgg ccgggtggg ccgcactgt cggtctcagt 300
 gccagtgga gggggaccgc ccgcccgtga ccatgtggac caagtagggc 350
 cgcaccatcc acagcggtg gagccgttc cgctgctgc cgcaggggct 400
 gaagtgtagg caggtggagc gggaggatgc cggcggtgac gtgtcagg 450
 ccaccaacgc ctccggcgc ctgagcgtca actacacct cgctgctgc 500
 gatgacatta gccaggga ggagagcctg gggcccgaca gctcctctg 550
 ggtcaagag gaccccgcca gccagcagt ggcacgacc cgcttcacac 600
 agccctcaa gatgagcggc cgggtgatgc caegggccgt gggtagctcc 650
 gtgcggctca agtgctggc cagcggggc cctcgccgc acatcacgtg 700
 gatgaaggac gaccaggcct tgacgcgcc agaggccgt gagccagga 750
 agaagaagtg gacactgagc ctgaagaacc tgcggccgga ggacagcgcc 800
 aaatacacct gccggtgtc gaaccggcg ggcgccatca acgccacct 850
 caagtggtat gtgatccgc ggaccggtc caagcccggt ctcacaggca 900
 cgcacccgt gaacacgagc gtggacttc gggggaccac gtcctccac 950
 tgcaaggtgc gcagcgacgt gaagccggtg atccagtggc tgaagcgct 1000
 ggagtaaggc gccaggggc gccacaact caccatcgat gtggcgggc 1050
 agaagtgtg ggtgctgcc acgggtgacg tgtggtcgcg gcccgaggc 1100
 tctacctca ataagctgt catcacccgt gcccgccagg acgatcggg 1150
 catgtacac tgccttgcc ccaacacccat gggctacagc ttcgcagcg 1200
 ccttcctcac cgtgctgcca gacccaaaac cgccaggggc acctgtggc 1250
 tctctgtct cggccaactg cctgcggtg ccggtggtca tcggcatccc 1300
 agccggcgct gtcttcaccc tgggcaccct gctcctgtgg ctttgcagg 1350
 cccagaagaa gccgtgcacc ccgcgcctg cccctccct gccctggcac 1400
 cgcccgccgc ggaaggccgc cgaccgcgc ggagacaagg acctccctc 1450
 gttggcgcc ctcagcgct gccctggtgt ggggctgtgt gaggagcatg 1500
 ggtctccgc agccccccag cacttaactg gccaggccc agttgctggc 1550
 cctaagttgt accccaaact ctacacagac atccacacac acacacacac 1600

acactctcac acacactcac acgtggaggg caaggtccac cagcacatcc 1650
 actatcagtg ctagacggca ccgtatctgc agtgggcacg ggggggcccg 1700
 ccagacaggc agactgggag gatggaggac ggagctgcag acgaaggcag 1750
 gggaccocatg gcgaggagga atggccagca cccaggcag tctgtgtgtg 1800
 aggcatagcc cctggacaca cacacacaga cacacacact acctggatgc 1850
 atgtatgcac acacatgcgc gcacacgtgc tccctgaagg cacacgtacg 1900
 cacacgcaca tgcacagata tgccgcctgg gcacacagat aagctgcca 1950
 aatgcacgca cagcgcacaga gacatgccag aacatacaag gacatgctgc 2000
 ctgaacatac acacgcacac ccatgcgcag atgtgctgcc tggacacaca 2050
 cacacacacg gatatgtgtt ctggacgcac acacgtgcag atatggtatc 2100
 cggacacaca cgtgcacaga tatgtgcct ggacacacag ataatgctgc 2150
 cttgacacac acatgcacgg atattgcctg gacacacaca cacacacacg 2200
 cgtgcacaga tatgtgtctt ggacacgcac acacatgcag atatgctgcc 2250
 tggacacaca cttccagaca cacgtgcaca ggccgagata tgtgcctgg 2300
 acacacgcag atatgctgtc tagtcacaca cacacgcaga catgctgtcc 2350
 ggacacacac acgcatgcac agatatgtgt tccggacaca cacacgcagc 2400
 cagatatgtct gcctggacac acacacagat aatgctgcct caacctcac 2450
 acacgtgcag atattgcctg gacacacaca tgtgcacaga tatgtgtct 2500
 ggacatgcac acacgtgcag atatgctgtc cggatacaca cgcacgcaca 2550
 catgcagata tgtgcctgg gcacacactt ccggacacac atgcacacac 2600
 aggtgcagat atgtgcctg gacacacaca cagataatgc tgccctcaaca 2650
 ctacacacac tgcagatat tgcctggacac acacatgtgc acagatatgc 2700
 tgtctggaca tgcacacacg tgcagatatg ctgtccggat acacacgcac 2750
 gcacacatgc agatatgctg cctgggcaca cacttcggga cacacatgca 2800
 cacacagggt cagatatgct gcctggacac acgcagactg acgtgctttt 2850
 gggaggggtg gcctgaagc ctgcagtacg tgtgccgtga ggcctatagt 2900
 tgatgaggga ctttccctgc tccaccgtca ccccccaac tctgcccgcc 2950
 tctgtcccg cctcagtcct cgcctccatc cccgcctctg tccctggcc 3000
 ttggcggcta tttttgccac ctgccttggg tgcccaggag tccootactg 3050
 ctgtgggctg gggttggggg cacagcagcc ccaagcctga gaggtggag 3100
 cccatggcta tgggtctatc ccagtgcat tctccccctg acacagagaa 3150
 ggggccttgg tatttatatt taagaaatga agataatatt aataatgatg 3200

gaaggaagac tgggttgacg ggactgtggt ctctcctggg gcccgggacc 3250
 cgctgtgtct ttcagccatg ctgatgacca caccocgtcc aggccagaca 3300
 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350
 tagagtttga gctgaagccc cgtatatatta atttattttg ttaaacacaa 3400
 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu
 1 5 10 15
 Leu Gly Ala Phe Pro Pro Ala Ala Ala Ala Arg Gly Pro Pro Lys
 20 25 30
 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg Thr Arg Ser	Lys Pro Val Leu Thr	Gly Thr His Pro Val Asn
245		250
Thr Thr Val Asp	Phe Gly Gly Thr Thr	Ser Phe Gln Cys Lys Val
260		270
Arg Ser Asp Val	Lys Pro Val Ile Gln	Trp Leu Lys Arg Val Glu
275		285
Tyr Gly Ala Glu	Gly Arg His Asn Ser	Thr Ile Asp Val Gly Gly
290		300
Gln Lys Phe Val	Val Leu Pro Thr Gly	Asp Val Trp Ser Arg Pro
305		315
Asp Gly Ser Tyr	Leu Asn Lys Leu Leu	Ile Thr Arg Ala Arg Gln
320		330
Asp Asp Ala Gly	Met Tyr Ile Cys Leu	Gly Ala Asn Thr Met Gly
335		345
Tyr Ser Phe Arg	Ser Ala Phe Leu Thr	Val Leu Pro Asp Pro Lys
350		360
Pro Pro Gly Pro	Pro Val Ala Ser Ser	Ser Ser Ala Thr Ser Leu
365		375
Pro Trp Pro Val	Val Ile Gly Ile Pro	Ala Gly Ala Val Phe Ile
380		390
Leu Gly Thr Leu	Leu Leu Trp Leu Cys	Gln Ala Gln Lys Lys Pro
395		405
Cys Thr Pro Ala	Pro Ala Pro Pro Leu	Pro Gly His Arg Pro Pro
410		420
Gly Thr Ala Arg	Asp Arg Ser Gly Asp	Lys Asp Leu Pro Ser Leu
425		435
Ala Ala Leu Ser	Ala Gly Pro Gly Val	Gly Leu Cys Glu Glu His
440		450
Gly Ser Pro Ala	Ala Pro Gln His Leu	Leu Gly Pro Gly Pro Val
455		465
Ala Gly Pro Lys	Leu Tyr Pro Lys Leu	Tyr Thr Asp Ile His Thr
470		480
His Thr His Thr	His Ser His Thr His	Ser His Val Glu Gly Lys
485		495
Val His Gln His	Ile His Tyr Gln Cys	
500		

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgcgc ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

ccagctgag gagccctgct caagacacgg tcaactggatc tgagaaactt 50

cccaggggac cgcattccag agtcagtgc tctgtgaagc acccacatct 100

acctcttgcc acgttccac gggcttgagg gaaagatggt ggggaccaag 150

gcctgggtgt tctccttct ggtcctggaa gtcacatctg tgttggggag 200

acagacgatg ctcaccagc cagtaagaag agtccagcct gggagaaga 250

acccagcat ctttgccaag cctgccgaca ccctggagag ccttggtag 300

tggacaacat ggttcaacat cgactacca ggcgggaagg ggcactatga 350

gcggtgagac gccattcgct tctactatgg ggaccgtgta tgtgcccgctc 400

ccctgcggct agaggtctgg accactgact ggacacctgc gggcagcact 450

ggccagggtg tccatggtag tcccgtgag ggtttctggt gcctcaacag 500

ggagcagcgg cctggccaga actgctctaa ttacacogta cgcttctctc 550

gccaccagc atccctgcgc cgagacacag agcgcatctg gagcccatgg 600

tctccctgga gcaagtgcct agctgcctgt ggtcagactg ggttccagac 650

tcgcacacgc atttgcttgg cagagatggt gtcgctgtgc agtgaggcca 700

gcgaagaggg tcagcactgc atggggccagg actgtacagc ctgtgacctg 750

acctgcccaa tggggcagggt gaatgtgac tgtgtatgcct gcattgtcca 800

ggacttcatg cttcatgggg ctgtctccct tccggagggt gccccagcct 850

caggggctgc tatctacctc ctgaccaaga cgcogaagct gctgaccag 900
acagacagtg atgggagatt ccgaatccct ggcttgtgcc ctgatggcaa 950
aagcatcctg aagatcacia aggtcaagtt tgccccatt gtactcacia 1000
tgcccaagac tagcctgaag gcagccacca tcaaggcaga gtttgtgagg 1050
gcagagactc catacatggt gatgaaccct gagacaaaag cacggagagc 1100
tgggcagagc gtgtctctgt gctgtaaggc cacagggaag cccaggccag 1150
acaagtattt ttggtatcat aatgacacat tgctggatoc ttcctctac 1200
aagcatgaga gcaagctggt gctgaggaaa ctgcagcagc accaggctgg 1250
ggagtacttt tgcaaggccc agagtgatgc tggggctgtg aagtccaagg 1300
ttgccagctc gattgtcaca gcctctgatg agactccttg caaccagtt 1350
cctgagagct atcttatccg gctgccccat gattgcttcc agaatgccac 1400
caactccttc tactatgacg tgggacgctg ccctgttaag acttgtgcag 1450
ggcagcagga taatgggacg aggtgccgtg atgctgtgca gaactgctgt 1500
ggcatctcca agacagagga aaggggagtc cagtgcagtg gctacacgct 1550
acccaccaag gtggccaagg agtgacagctg ccagcgggtg acggaacctc 1600
ggagcatcgt gcggggccgt gtcagtgtgc ctgacaatgg ggagcccatg 1650
cgctttggcc atgtgtacat ggggaacagc cgtgtaagca tgactggcta 1700
caagggcact ttcaccctcc atgtccccc ggacactgag aggcgtgtgc 1750
tcacatttgt ggacaggctg cagaagtttg tcaacaccac caaagtgtca 1800
cctttcaaca agaaggggag tgccgtgttc catgaaatca agatgcttcg 1850
tcggaagagc cccatcactt tggaagccat ggagaccaac atcatcccc 1900
tgggggaagt ggttgggtgaa gaccocatgg ctgaactgga gattccatcc 1950
aggagtttct acaggcagaa tggggagccc tacataggaa aagtgaaggc 2000
cagtgtgacc ttcctggatc cccggaatat ttccacagcc acagctgccc 2050
agactgacct gaacttcac aatgacgaag gagacacttt cccctctcgg 2100
acgtatggca tgttctctgt ggacttcaga gatgaggta cctcagagcc 2150
acttaagtct ggcaaaagtga aggtccacct tgactcgacc caggtaagaa 2200
tgccagagca catatccaca gtgaaactct ggtcactcaa tccagacaca 2250
gggctgtggg aggaggaagg tgatttcaaa ttgaaaato aaaggaggaa 2300
caaaagagaa gacagaacct tctgggtggg caacctggag atcgtgaga 2350
ggaggtctct taacctggat gttcctgaaa gcaggcgggt ctttgttaag 2400
gtgagggcct accggagtga gaggttcttg cctagtgagc agatccaggg 2450

ggttgatgc tccgtgatta acctggagcc tagaactggc ttcttgcca 2500
 acctagggc ctggggccgc ttgacagtgc tcatcacagg ccccaacggg 2550
 gcctgtgtgc ctgccttctg tcatgaccag tccctctgat cctactctgc 2600
 ctatgtcttg gcaagcctgg ctggggagga actgcaagca gtggagtctt 2650
 ctctaaatt caaccctaat gcaattggcg tccctcagcc ctatctcaac 2700
 aagctcaact accgtcggac ggaccatgag gatccacggg ttaaaagac 2750
 agctttccag attagcatgg ccaagccaag gcccaactca gctgaggaga 2800
 gcaatggggc catctatgcc ttgagaacc tccgggcatg tgaagaggca 2850
 ccaccgatg cagccactt cgggttctac cagattgagg gggatcgata 2900
 tgactacaac acagtccct tcaacgaaga tgaccctatg agctggactg 2950
 aagactatct ggcattgttg ccaagccga tggaattcag ggctgctat 3000
 atcaaggatg agattgtggg gccactggaa gtgaattgct gatcccgcaa 3050
 catggggggc actcatggc ggacagtggg gaagctgtat ggaatccgag 3100
 atgtgaggag cactcgggac agggaccagc ccaatgtctc agctgectgt 3150
 ctggagttca agtgcatgg gatgctctat gatcaggacc gtgtggaccg 3200
 caacctggtg aaggctatcc ccagggcag ctgccgtcga gccagtgtga 3250
 acccatgct gcatgagtag ctgggtcaacc acttgccact tgcagtcaac 3300
 aacgacacca gtgagtagac catgctggca ccttgagacc cactgggcca 3350
 caactatggc atctacactg tcactgacca ggacctcgc acggccaagg 3400
 agatcgcgct cggccgggtc ttgatggca catccgatgg ctctctcaga 3450
 atcatgaaga gcaatgtggg agtagccctc accttcaact gtgtagagag 3500
 gcaagtaggc cgccagagtg cttccagta cctccaaagc accccagccc 3550
 agtccctgc tgcaggcact gtccaaggaa gagtgcctc gaggaggcag 3600
 cagcgagcga gcaggggtg ccagcgccag ggtggagtgg tggcctctct 3650
 gagatttctt agagtgtctc aacagccctt gatcaactaa gttttgtgt 3700
 acttcacctt cttctgccct catttcatgt gacagccatt gtgagactga 3750
 tgcacaaact gtcacttggg taatttaagc acctctgttt tcgtgaattt 3800
 gctgttttgt ttcttcatgc ctttacttac ttgttccat gctactgatt 3850
 ggcacgtggc ccccaaatg gcacaataaa gccctttgtg gaaactgttc 3900
 tttaaatgaa acacaagaaa ttggccactg gtaaaactct gcagcttcaa 3950
 ctgtacttca tttaatgcca ttaatgcaa tatacttctt cttctttttg 4000
 catggttttg cccacctctg caatagtgat aatctgatgc tgaagatcaa 4050

ataaccaata taaagcatat ttcttgccct tgctccacag gacataggca 4100
 agccttgatc atagttcata catataaatg gtggtgaaat aaagaataaa 4150
 aacacaatac ttttacttga aatgtaaata acttatttat ttctttgcta 4200
 aatttggaat tctagtgcac attcaaagt aagctattaa atataggggtg 4250
 atcatagttc ctctaccaag tctggaaaga acatctcctg gtatccacaa 4300
 ttacaccagg ttgctaactg tatttgata ttccctttg cattogcttt 4350
 tgttcttgct agaaaccag ttagcccag ggcagatgto aataaatgca 4400
 tactctgtat ttogaaaaaa 4420

<210> 124
 <211> 1184
 <212> PRT
 <213> Homo sapiens

<400> 124
 Met Val Gly Thr Lys Ala Trp Val Phe Ser Phe Leu Val Leu Glu
 1 5 10 15
 Val Thr Ser Val Leu Gly Arg Gln Thr Met Leu Thr Gln Ser Val
 20 25 30
 Arg Arg Val Gln Pro Gly Lys Lys Asn Pro Ser Ile Phe Ala Lys
 35 40 45
 Pro Ala Asp Thr Leu Glu Ser Pro Gly Glu Trp Thr Thr Trp Phe
 50 55 60
 Asn Ile Asp Tyr Pro Gly Gly Lys Gly Asp Tyr Glu Arg Leu Asp
 65 70 75
 Ala Ile Arg Phe Tyr Tyr Gly Asp Arg Val Cys Ala Arg Pro Leu
 80 85 90
 Arg Leu Glu Ala Arg Thr Thr Asp Trp Thr Pro Ala Gly Ser Thr
 95 100 105
 Gly Gln Val Val His Gly Ser Pro Arg Glu Gly Phe Trp Cys Leu
 110 115 120
 Asn Arg Glu Gln Arg Pro Gly Gln Asn Cys Ser Asn Tyr Thr Val
 125 130 135
 Arg Phe Leu Cys Pro Pro Gly Ser Leu Arg Arg Asp Thr Glu Arg
 140 145 150
 Ile Trp Ser Pro Trp Ser Pro Trp Ser Lys Cys Ser Ala Ala Cys
 155 160 165
 Gly Gln Thr Gly Val Gln Thr Arg Thr Arg Ile Cys Leu Ala Glu
 170 175 180
 Met Val Ser Leu Cys Ser Glu Ala Ser Glu Glu Gly Gln His Cys
 185 190 195
 Met Gly Gln Asp Cys Thr Ala Cys Asp Leu Thr Cys Pro Met Gly
 200 205 210

Gln	Val	Asn	Ala	Asp	Cys	Asp	Ala	Cys	Met	Cys	Gln	Asp	Phe	Met
				215					220					225
Leu	His	Gly	Ala	Val	Ser	Leu	Pro	Gly	Gly	Ala	Pro	Ala	Ser	Gly
				230					235					240
Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln
				245					250					255
Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp
				260					265					270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile
				275					280					285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys
				290					295					300
Ala	Glu	Phe	Val	Arg	Ala	Glu	Thr	Pro	Tyr	Met	Val	Met	Asn	Pro
				305					310					315
Glu	Thr	Lys	Ala	Arg	Arg	Ala	Gly	Gln	Ser	Val	Ser	Leu	Cys	Cys
				320					325					330
Lys	Ala	Thr	Gly	Lys	Pro	Arg	Pro	Asp	Lys	Tyr	Phe	Trp	Tyr	His
				335					340					345
Asn	Asp	Thr	Leu	Leu	Asp	Pro	Ser	Leu	Tyr	Lys	His	Glu	Ser	Lys
				350					355					360
Leu	Val	Leu	Arg	Lys	Leu	Gln	Gln	His	Gln	Ala	Gly	Glu	Tyr	Phe
				365					370					375
Cys	Lys	Ala	Gln	Ser	Asp	Ala	Gly	Ala	Val	Lys	Ser	Lys	Val	Ala
				380					385					390
Gln	Leu	Ile	Val	Thr	Ala	Ser	Asp	Glu	Thr	Pro	Cys	Asn	Pro	Val
				395					400					405
Pro	Glu	Ser	Tyr	Leu	Ile	Arg	Leu	Pro	His	Asp	Cys	Phe	Gln	Asn
				410					415					420
Ala	Thr	Asn	Ser	Phe	Tyr	Tyr	Asp	Val	Gly	Arg	Cys	Pro	Val	Lys
				425					430					435
Thr	Cys	Ala	Gly	Gln	Gln	Asp	Asn	Gly	Ile	Arg	Cys	Arg	Asp	Ala
				440					445					450
Val	Gln	Asn	Cys	Cys	Gly	Ile	Ser	Lys	Thr	Glu	Glu	Arg	Glu	Ile
				455					460					465
Gln	Cys	Ser	Gly	Tyr	Thr	Leu	Pro	Thr	Lys	Val	Ala	Lys	Glu	Cys
				470					475					480
Ser	Cys	Gln	Arg	Cys	Thr	Glu	Thr	Arg	Ser	Ile	Val	Arg	Gly	Arg
				485					490					495
Val	Ser	Ala	Ala	Asp	Asn	Gly	Glu	Pro	Met	Arg	Phe	Gly	His	Val
				500					505					510
Tyr	Met	Gly	Asn	Ser	Arg	Val	Ser	Met	Thr	Gly	Tyr	Lys	Gly	Thr
				515					520					525

Phe Thr Leu His	Val Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr
530		535 540
Phe Val Asp Arg	Leu Gln Lys Phe Val	Asn Thr Thr Lys Val Leu
545		550 555
Pro Phe Asn Lys	Lys Gly Ser Ala Val	Phe His Glu Ile Lys Met
560		565 570
Leu Arg Arg Lys	Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn
575		580 585
Ile Ile Pro Leu	Gly Glu Val Val Gly	Glu Asp Pro Met Ala Glu
590		595 600
Leu Glu Ile Pro	Ser Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro
605		610 615
Tyr Ile Gly Lys	Val Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg
620		625 630
Asn Ile Ser Thr	Ala Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile
635		640 645
Asn Asp Glu Gly	Asp Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe
650		655 660
Ser Val Asp Phe	Arg Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala
665		670 675
Gly Lys Val Lys	Val His Leu Asp Ser	Thr Gln Val Lys Met Pro
680		685 690
Glu His Ile Ser	Thr Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr
695		700 705
Gly Leu Trp Glu	Glu Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg
710		715 720
Arg Asn Lys Arg	Glu Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu
725		730 735
Ile Arg Glu Arg	Arg Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg
740		745 750
Arg Cys Phe Val	Lys Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu
755		760 765
Pro Ser Glu Gln	Ile Gln Gly Val Val	Ile Ser Val Ile Asn Leu
770		775 780
Glu Pro Arg Thr	Gly Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg
785		790 795
Phe Asp Ser Val	Ile Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala
800		805 810
Phe Cys Asp Asp	Gln Ser Pro Asp Ala	Tyr Ser Ala Tyr Val Leu
815		820 825
Ala Ser Leu Ala	Gly Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro
830		835 840

Lys	Phe	Asn	Pro	Asn	Ala	Ile	Gly	Val	Pro	Gln	Pro	Tyr	Leu	Asn	845	850	855
Lys	Leu	Asn	Tyr	Arg	Arg	Thr	Asp	His	Glu	Asp	Pro	Arg	Val	Lys	860	865	870
Lys	Thr	Ala	Phe	Gln	Ile	Ser	Met	Ala	Lys	Pro	Arg	Pro	Asn	Ser	875	880	885
Ala	Glu	Glu	Ser	Asn	Gly	Pro	Ile	Tyr	Ala	Phe	Glu	Asn	Leu	Arg	890	895	900
Ala	Cys	Glu	Glu	Ala	Pro	Pro	Ser	Ala	Ala	His	Phe	Arg	Phe	Tyr	905	910	915
Gln	Ile	Glu	Gly	Asp	Arg	Tyr	Asp	Tyr	Asn	Thr	Val	Pro	Phe	Asn	920	925	930
Glu	Asp	Asp	Pro	Met	Ser	Trp	Thr	Glu	Asp	Tyr	Leu	Ala	Trp	Trp	935	940	945
Pro	Lys	Pro	Met	Glu	Phe	Arg	Ala	Cys	Tyr	Ile	Lys	Val	Lys	Ile	950	955	960
Val	Gly	Pro	Leu	Glu	Val	Asn	Val	Arg	Ser	Arg	Asn	Met	Gly	Gly	965	970	975
Thr	His	Arg	Arg	Thr	Val	Gly	Lys	Leu	Tyr	Gly	Ile	Arg	Asp	Val	980	985	990
Arg	Ser	Thr	Arg	Asp	Arg	Asp	Gln	Pro	Asn	Val	Ser	Ala	Ala	Cys	995	1000	1005
Leu	Glu	Phe	Lys	Cys	Ser	Gly	Met	Leu	Tyr	Asp	Gln	Asp	Arg	Val	1010	1015	1020
Asp	Arg	Thr	Leu	Val	Lys	Val	Ile	Pro	Gln	Gly	Ser	Cys	Arg	Arg	1025	1030	1035
Ala	Ser	Val	Asn	Pro	Met	Leu	His	Glu	Tyr	Leu	Val	Asn	His	Leu	1040	1045	1050
Pro	Leu	Ala	Val	Asn	Asn	Asp	Thr	Ser	Glu	Tyr	Thr	Met	Leu	Ala	1055	1060	1065
Pro	Leu	Asp	Pro	Leu	Gly	His	Asn	Tyr	Gly	Ile	Tyr	Thr	Val	Thr	1070	1075	1080
Asp	Gln	Asp	Pro	Arg	Thr	Ala	Lys	Glu	Ile	Ala	Leu	Gly	Arg	Cys	1085	1090	1095
Phe	Asp	Gly	Thr	Ser	Asp	Gly	Ser	Ser	Arg	Ile	Met	Lys	Ser	Asn	1100	1105	1110
Val	Gly	Val	Ala	Leu	Thr	Phe	Asn	Cys	Val	Glu	Arg	Gln	Val	Gly	1115	1120	1125
Arg	Gln	Ser	Ala	Phe	Gln	Tyr	Leu	Gln	Ser	Thr	Pro	Ala	Gln	Ser	1130	1135	1140
Pro	Ala	Ala	Gly	Thr	Val	Gln	Gly	Arg	Val	Pro	Ser	Arg	Arg	Gln	1145	1150	1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 125
 ctggtgctc aacagggagc ag 22

<210> 126
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 126
 ccattgtgca ggtcaggtca cag 23

<210> 127
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 127
 ctggagcaag tgctcagctg cctgtgtgta gactggggtc 40

<210> 128
 <211> 2819
 <212> DNA
 <213> Homo sapiens

<400> 128
 ctgcaagttg ttaacgccta acacacaagt atgttaggct tccaccaag 50
 tcctcaatat acctgaatac gcacaatato ttaactcttc atatttgggt 100
 ttgggatctg ctttgaggtc ccatcttcat ttaaaaaaaaa atacagagac 150
 ctacctaccc gtacgcatac atacatatgt gtatatatat gtaaacataga 200
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250
 aaaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcattgccct 300
 ttgggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350
 attatgattt gtgtaagact cagatttaca cggaagaagg gaaagtttgg 400
 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500
 tctgtgcaat gggcaatccc tacatgtgca ataagtagtg tgatgcgagt 550
 acccctgagc tggcacaccc cctgagctg atgtttgatt ttgaaggaag 600
 acatccctcc acattttggc agtctgccac ttggaaggag tatcccaagc 650
 ctctccaggt taacatcact ctgtcttgga gcaaaacat tgagetaaca 700
 gacaacatag ttattacott tgaatctggg cgtccagacc aaatgatcct 750
 ggagaagtct ctcgattatg gacgaacatg gcagccctat cagtattatg 800
 ccacagactg cttagatgct ttccacatgg atcctaaatc cgtgaaggat 850
 ttatcacagc atacggtctt agaaatcatt tgcacagaag agtactcaac 900
 aggtatatac acaaatagca aaataatcca ctttgaaatc aaagacaggt 950
 tcgcgctttt tgctggacct cgcctacgca atatggcttc cctctacgga 1000
 cagctggata caaccaagaa actcagagat ttctttacag tcacagacct 1050
 gaggataagg ctgttaagac cagccgttgg ggaatatatt gtatagtagc 1100
 tacacttggc acgctacttt tacgcgatct cagacataaa ggtgcgagga 1150
 aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200
 attgacatgc gaatgtgagc acaacactac aggtccagac tgtgggaaat 1250
 gcaagaagaa ttatcagggc cgacottgga gtccaggctc ctatctcccc 1300
 atccccaag gcaactgcaa taccgtgtac ccagttattt ccagtatttg 1350
 tacgaatgtc tgcgacaacg agctcctgca ctgccagaac ggagggacgt 1400
 gccacaacaa cgtgcgctgc ctgtgcccg ggcacatacac gggcatcctc 1450
 tgcgagaagc tgcggtgcga ggaggctggc agctgcggct ccgactctgg 1500
 ccaggggcgc ccccgcaagc gcaccccgac gctgctgctg ctgaccacgc 1550
 tgctgggaac cgccagcccc ctggtgttct aggtgtcacc tccagccaca 1600
 cgggacgggc ctgtgccgtg gggaagcaga cacaacccaa acatttgcta 1650
 ctaacatagg aaacacacac atacagacac cccactcag acagtgtaca 1700
 aactaagaag gcctaactga actaagccat atttatcacc cgtggacagc 1750
 acatccgagt caagactgtt aatttctgac tccagaggag ttggcagctg 1800
 ttgatattat cactgcaaat cacattgcca gctgcagagc atatttgga 1850
 ttggaaaggc tgcgacagcc ccccaaagc gaaagacaaa aaacaaacaa 1900
 atcaaccgac ctaaaaaacat tggctactct agcgtggtgc gcctagtac 1950
 gactccgccc agtgtgtgga ccaaccaaag agcattcttt gctgtcaggt 2000
 gcatttgtgg cataaggaaa tctgttacaa gctgccatat tggcctgctt 2050

ccgtccctga atcccttcca acctgtgctt tagtgaacgt tgctctgtaa 2100
 ccctcgttgg ttgaaagatt tctttgtctg atgttagtga tgcacatgty 2150
 taacagcccc ctctaaaagc gcaagccagt cataccctgt tatatcttag 2200
 cagcactgag tccagtgcga gcacacaccc actatacaag agtggctata 2250
 ggaaaaaaga aagtgtatct atccttttgt attcaaatga agttattttt 2300
 ctggaactac tgtaatatgt agattttttg tattattgtcc aatttgtgtt 2350
 accagacaat ctgttaatgt atctaattcg aatcagcaaa gactgacatt 2400
 ttattttgtc ctctttcgtt ctgttttgtt tcaactgtgca gagatttctc 2450
 tgtaagggca acgaacgtgc tggcatcaaa gaatatcagt ttacatatat 2500
 aacaagtgtg ataagattcc accaaaggac attctaaatg ttttcttgtt 2550
 gctttaacac tggaagattt aaagaataaa aactcctgca taaacgattt 2600
 caggaatttg tattgcaatt tcttaagatg aaaggaacag ccaccaagca 2650
 gtttcacact cactttactg atttctgtgt ggactgagta cattcagctg 2700
 acgaatttag ttcccaggaa gatggattga tgttcactag cttggacaac 2750
 ttctgcaaaa tatgagacta ttccacttg ggaataaata caacagcaaa 2800
 aaaaaaaaaa aaaaaaaaaa 2819

<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

Met	Tyr	Leu	Ser	Arg	Ser	Leu	Ser	Ile	His	Ala	Leu	Trp	Val	Thr
1				5					10					15
Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
				20					25					30
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Glu	Gly	Lys	Val	Trp
				35					40					45
Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
				50					55					60
Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
				65					70					75
Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn
				80					85					90
Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu
				95					100					105
Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser
				110					115					120
Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr

125	130	135
Leu Ser Trp Ser Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val Ile	
140	145	150
Thr Phe Glu Ser Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys Ser	
155	160	165
Leu Asp Tyr Gly Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala Thr	
170	175	180
Asp Cys Leu Asp Ala Phe His Met Asp	Pro Lys Ser Val Lys Asp	
185	190	195
Leu Ser Gln His Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu Tyr	
200	205	210
Ser Thr Gly Tyr Thr Thr Asn Ser Lys	Ile Ile His Phe Glu Ile	
215	220	225
Lys Asp Arg Phe Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn Met	
230	235	240
Ala Ser Leu Tyr Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg Asp	
245	250	255
Phe Phe Thr Val Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro Ala	
260	265	270
Val Gly Glu Ile Phe Val Asp Glu Leu	His Leu Ala Arg Tyr Phe	
275	280	285
Tyr Ala Ile Ser Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys Asn	
290	295	300
Leu His Ala Thr Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr Cys	
305	310	315
Glu Cys Glu His Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys Lys	
320	325	330
Lys Asn Tyr Gln Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu Pro	
335	340	345
Ile Pro Lys Gly Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser Ser	
350	355	360
Ile Gly Thr Asn Val Cys Asp Asn Glu	Leu Leu His Cys Gln Asn	
365	370	375
Gly Gly Thr Cys His Asn Asn Val Arg	Cys Leu Cys Pro Ala Ala	
380	385	390
Tyr Thr Gly Ile Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala Gly	
395	400	405
Ser Cys Gly Ser Asp Ser Gly Gln Gly	Ala Pro Pro His Gly Thr	
410	415	420
Pro Ala Leu Leu Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser Pro	
425	430	435
Leu Val Phe		

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
tcgattatgg acgaacatgg cagc 24

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
aggttcaggg acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
ttgtctggac ctccggctacg gaattggctt ccctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
cccacgcgctc cgggtgacct gggccgagcc ctcccggtcg gctaagattg 50
ctgaggaggcg ggcgggtagc tggcaggcgc cgacttccga aggcccgctt 100
cggggcgagg tgctctcatg acttctcttg tggacctatg ccgtgatatt 150
ttttgcctgc gtggtacggg taagggatgg actgcccttc tcagcctcta 200
ctgattttta ccacaccaa gatttttttg aatggaggag acggctcaag 250
agttagcct tgcgactggc ccagtatcca ggtcagggtt ctgcagaagg 300

ttgtgacttt agtatacatt tttcttcttt cggggacgtg gcctgcattg 350
 ctatctgctc ctgccagtgt ccagcagcca tggccttctg cttoctggag 400
 accctgtggt gggaattcac agcttctcat gacactacct gcattggcct 450
 agcctccagg ccatacgctt ttcttgagtt tgacagcctc attcagaaa 500
 tgaagtggca ttttaactat gtaagttcct ctcatagga gtgcagcttg 550
 gaaaaaatc aggaggagct caagttgcag cctccagcgg ttctcactct 600
 ggaggacaca gatgtggcaa atggggtgat gaatggtcac acaccgatgc 650
 acttgagacc tgctcctaatt ttccgaatgg aaccagtgac agccctgggt 700
 atcctctccc toattctcaa catcatgtgt gctgccctga atctcattcg 750
 aggagttcac ctgcagaac attctttaca ggatccaagg agctggttct 800
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
 gagctctgat tctcccattc gggagcagtg atgtcaaact tctgctgctg 900
 gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaat 950
 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
 gctgttgccc acaagcgctt tttatttagg gtaaaattaa caaatccatt 1050
 ctattcctct gaccatgct tagtacatat gaccttaac ccttacattt 1100
 atatgattct ggggttgctt cagaagtgtt atttcagaa tcatctatat 1150
 gatttgatcc ccagggattc tattttgttt aatgggcttt tctactaaaa 1200
 gcataaaata ctgaggctga tttagtcagg gcaaaacct ttaacttaca 1250
 tattcgtttt caatactgc tgttcattgt acacaagctt cttacggttt 1300
 tcttgtaaca ataaatattt tgagtaata atgggtacat tttacaaaa 1350
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 135
 Met Ser Val Ile Phe Phe Ala Cys Val Val Arg Val Arg Asp Gly
 1 5 10
 Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe
 20 25 30
 Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala
 35 40 45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	50	55	60
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	65	70	75
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	80	85	90
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	95	100	105
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	110	115	120
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	125	130	135
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	140	145	150
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	155	160	165
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	170	175	180
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	185	190	195
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	200	205	210
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	215	220	225
Gln	Thr	Ser															

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttcctg agacctgtg gtgggaattc acagcttcnt atgacactac 50
 ctgcattggc ntacgctcca ggccatacgc ttttcttgag tttgacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctcagac 200
 ggttcctcant atggaggaca cagatgtggc aaatggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcgcg cttcctcgta gcgagcctag tggcggggtg ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgctcc 150
ggagcactgt atctgagccc cagactgcc cgagtttctg tcgcaggctg 200
cgaggaaagg cccctaggct gggctctgggt gcttggcggc ggcggcttcc 250
tccccgctcg tcctccccgg gccagaggc acctcggtct cagtcatgct 300
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tataatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgacccgctt caagaagcct 450
gctgagtcca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgcaccttta ccttggcaat tgcctgggtg gctgtcctcg 550
tcctgccctt ctccatcacc agcaatgagg tgetgctctc cctgcctcgg 600
aactactaca tccagtggct caacggctcc ctcatccatg gccctctgga 650
cctgtttttt ctcttcccca acctgtccct catcttctct atgccctttg 700
catattttt cactgagtct gagggctttg ctggctccag aaaggtgtgc 750
ctgggccggg tctatgagac agtgggtgat ttgatgctcc tcactctgct 800
ggtgctaggt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctcttctct tgggggtctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagg 1000
cccggctgct ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050
gaggcagccc tgacccgag gatctgtaat cctacttctc gctggctgcc 1100
tttagacatg gagctgctac acagacaggt cctggctctg cagacacaga 1150
gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200
ggctaccccc tggctatgct gtgcttctg gtgctgacgg cctgtctgt 1250
gctcattgtg gccatccaca tcctggagct gctcatcgat gaggctgcca 1300
tgccccgagg catgcagggt acctccttag gccaggctct cttctccaag 1350
ctgggctcct ttggtgccgt cattcagggt gtactcatct ttaacataat 1400
ggtgtctca gttgtgggct tctatagctc tccactcttc cgagacctgc 1450
ggccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tcttaagctc agcacttcct gtcttctctc gaaccctggg 1550
 gctcactcgc ttgacctgc tgggtgactt tggacgcttc aactggctgg 1600
 gcaatttcta cattgtgttc ctctacaacg cagcctttgc aggcctcacc 1650
 acactctgtc tgggtgaagac cttcactgca gctgtgcggg cagagctgat 1700
 ccgggcccctt gggtgggaca gactgccgct gcccgctctc ggtttccccc 1750
 aggcactctag gaagaccag caccagtgc ctcagctgg ggtggggaag 1800
 gaaaaaactg gacactgcc a tctgctgcct aggcctggag ggaagcccaa 1850
 ggctacttgg acctcaggac ctggaatctg agaggggtgg tggcagaggg 1900
 gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
 ggacctcctg cttttccata cttaactgtg gcctcagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaa aggaactggc cagggcaggc 2150
 tcgggagata gattgtctcc cttgcctctg gcccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
1				5					10					15
Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
			20						25					30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
			35						40					45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
			50						55					60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
			65						70					75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
			80						85					90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
			95						100					105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
			110						115					120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

	125	130	135
Glu Ser Glu Gly Phe Ala Gly Ser Arg	Lys Gly Val Leu Gly Arg		
140	145	150	
Val Tyr Glu Thr Val Val Met Leu Met	Leu Leu Thr Leu Leu Val		
155	160	165	
Leu Gly Met Val Trp Val Ala Ser Ala	Ile Val Asp Lys Asn Lys		
170	175	180	
Ala Asn Arg Glu Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu Pro		
185	190	195	
Tyr Leu Tyr Ser Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu Leu		
200	205	210	
Val Cys Thr Pro Leu Gly Leu Ala Arg	Met Phe Ser Val Thr Gly		
215	220	225	
Lys Leu Leu Val Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu Gln		
230	235	240	
Leu Tyr Cys Ser Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg Ile		
245	250	255	
Cys Asn Pro Thr Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu Leu		
260	265	270	
His Arg Gln Val Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu Glu		
275	280	285	
Lys Arg Arg Lys Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr Pro		
290	295	300	
Leu Ala Met Leu Cys Leu Leu Val Leu	Thr Gly Leu Ser Val Leu		
305	310	315	
Ile Val Ala Ile His Ile Leu Glu Leu	Leu Ile Asp Glu Ala Ala		
320	325	330	
Met Pro Arg Gly Met Gln Gly Thr Ser	Leu Gly Gln Val Ser Phe		
335	340	345	
Ser Lys Leu Gly Ser Phe Gly Ala Val	Ile Gln Val Val Leu Ile		
350	355	360	
Phe Tyr Leu Met Val Ser Ser Val Val	Gly Phe Tyr Ser Ser Pro		
365	370	375	
Leu Phe Arg Ser Leu Arg Pro Arg Trp	His Asp Thr Ala Met Thr		
380	385	390	
Gln Ile Ile Gly Asn Cys Val Cys Leu	Leu Val Leu Ser Ser Ala		
395	400	405	
Leu Pro Val Phe Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp Leu		
410	415	420	
Leu Gly Asp Phe Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr Ile		
425	430	435	
Val Phe Leu Tyr Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu Cys		

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgcccag ggaaggcccc ttgggttggt cttggttgct tggcgccggc 50
 ggnnttcntcc ccgctcgtcc tccccgggcc cagaggcacc tcggcttcag 100
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
 gagaacagct attccacgag aggatccgcg agtgtattat atcaacacct 200
 ctgtttgcaa cactgtacat cctctgccac atcttctcga ccgcttcaa 250
 gaagcctgct gaggtcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaagga ggacagagcc ttttaaaacg 50
 agcggttggt gcctgccctt taaggcgagg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggtcgcgag gaaaggcccc 150
 taggtcgggt ctggtgcttg gcggcgccgg cttcctcccc gttgtcntcc 200
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcata tccgtgcgag aacagctatt ccaagagagg 300
 atccgcgagt gtattatatc aacactttctg ttgcaacac tgtacatcnt 350
 ctgccacatc ttctgaccc gettcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

tttaccctgg caattgccct ggggtgctgc ctgctcctgc ccttctccat 500

catcagcaat gaggtgctgc actccc 526

<210> 141
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 141
 gactgtatct gagccccaga ctgc 24

<210> 142
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 142
 tcagcaatga ggtgctgctc 20

<210> 143
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 143
 tgaggaagat gagggacagg ttgg 24

<210> 144
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 144
 tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 145
 gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50

caaacctggt ttggaattga ggaaacttct cttttgatct cagcccttgg 100

tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctctc 150

gtcagtggaac agtttgcgaag gacacccagg ccattatatt tccctccagcc 200

tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaagaaa tactaagaga aacccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc aggccagggt ctcccctctc agtagccctg 400
 tgcaacttga tttttcttca gagatgggat ttctcatgc tgcccaggt 450
 aatgttgaac tctctgggtc aagtgatctg ctcacctagg cctctcaaa 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta ttacaagaa tgataatgtc ctggcattcc ttaataaaa 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120

Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
 cagaagagggt ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50
 cccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100
 cgcgccgcgc gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaacat ggctccgcag aacctgagca ccttttgcct gttgctgcta 200
 tacctcatcg gggcgggtgat tgccggacga gattttctata agatcttggg 250
 ggtgcctcga agtgccctcta taaaggatat taaaaggcc tataggaaac 300
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaattcc aggatctggg tgcgtcttat gaggttctgt cagatagtga 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttctttgg ggattttggt 500
 ttcattgttg gaggaacccc tgcgcagcaa gacagaaata ttccaagagg 550
 aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgacg 600
 gaaattttgt ggaagtagtt agaacaacac ctgtggcaag gcaggtctct 650
 ggcaaacgga agtgcaattg tcggcaagag atcgcgacca cccagctggg 700
 ccctgggcgc ttccaaatga cccaggaggt ggtctgcgac gaatgcccta 750
 atgtcaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
 ggggtgagag acggcatgga gtacccttt attggagaag gtgagcccta 850
 cgtgatggg gagcctggag atttacggtt ccgaatcaaa gttgtcaacg 900
 acccaatatt tgaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagttag agtcactggt tggctttgag atggatatta ctacttggg 1000
 tggtcacaag gtacatatct cccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatctc 1100
 aagggctctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caaggggtcag 1200
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcagggttt 1300
 ttttgtgtgt gttttgttt ttattttcaa tatgcaagtt aggcctaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggtct aagaatttgt 1400
 ccatttgcac tcggaaaaga atgaccagca aaaggtttac taatacctct 1450
 ccctttgggg atttaatgtc tgggtgctgcc gcctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaagaa acacaatata gaggggttga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
 tacattttgt tgttattttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
 tgggaccagg gaaccccggtg ccccccggtg gagngcctaa caggccggtg 50
 gntgcgacgg aagcgccggg cggaggaggt tttagaggatt ttggaacag 100
 gaccgcgaca gaggaaccat ggtccgcag aacntgagca cnttttgct 150
 gttgntgnta tacttcacg gggcggtgat tgcggagcga gatttntata 200
 agattttggg gtgcctngaa gtgcctnta taaaggatat taaaaagcc 250
 tataggaac tagccctgca gnttatccc gaccggaacc ctgatgatcc 300
 acaagcccag gagaattcc aggatgtgg tgcgtcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttg 450
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
 ggcacgaggg ggcggggcag tcgcgggatg cggccgggag ccacagcctg 50
 aggcctcag gtctctgcag gtgctgtgga ggaacctagc acctgccatc 100
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gagtcaggag cctctggaa gcattggagac tgtgtgtgatt 200
 gttgccatag gtgtgctggc caccatttt ctggcttcgt ttgcagcctt 250
 ggtgtgtggt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagccatt gtggacctca ttggtgccat ggagaccag 350
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaacccca 400
 cattgaggcc atctctggaga atgaagactg gatcgaagat gcctcgggtc 450
 tcatgtccca ctgcattgcc atcttgaaga ttgtcacac tctgacagag 500
 aagcttgttg ccatgacaat gggctctggg gccaaagatga agacttcagc 550
 cagtgtcagc gacatcattg ttggtggccaa gcggatcagc cccagggttg 600
 atgatgttgt gaagtcgatg taccctcogt tggaccocaa actcctggac 650
 gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgctggtgac 700
 aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
 tgtcggctgc tgaggagcat ttggaagtcc ttgcagaagc agccctagct 800
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
 gtctgcaatt tagtgcctac aggccagcag ctagccatga aggccctgc 900
 cgcctccct ggatggtcca gcttagcctt ctacttttcc ctatagagt 950
 agttgttctc caccgctgga gagtgcagct gtgtgtgcat agtaaagcag 1000
 gagatccocg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
 gagtggcagt ctaatactac agtttaggga gatgcattc actctctgca 1100
 agaggagtat tgaaaaactgg tggactgtca gctttatcta gctcacctag 1150
 tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
 taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
 ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
 tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350
 tgtattatct gcoctggtccc tgaggcgtct ggtctctccc tctcccttgc 1400
 aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
 tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaattt 1500
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151
 <211> 226
 <212> PRT
 <213> Homo sapiens

<400> 151
 Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile
 1 5 10 15
 Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg
 20 25 30
 Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu			
	65	70	75
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu			
	80	85	90
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr			
	95	100	105
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys			
	110	115	120
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile			
	125	130	135
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu			
	140	145	150
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser			
	155	160	165
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr			
	170	175	180
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu			
	185	190	195
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp			
	200	205	210
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala			
	215	220	225
Ile			

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
 gcttcatttc tcccgactca gcttcccacc ctgggctttc cgaggtgctt 50
 tcgccgtgt cccaccact gcagccatga tctccttaac ggacacgcag 100
 aaaaattgaa tgggattaac aggatttga gtgttttttc tgttcttttg 150
 aatgattctc ttttttgaca aagcactact ggctatttga aatgttttat 200
 ttgtagccgg cttagctttt gtaattgggt tagaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

atttgtatgc cttattggtt ggcctttgat aggcattgato ttcgaaattt 350
 atggattttt tctcttgttc aggggcttct ttcctgtcgt tgttggcctt 400
 attagaagag tgccagtcct tggatccctc cttaaatttac ctggaattag 450
 atcatttcta gataaagttg gagaaagcaa caatatggta taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattttca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattatga 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaaact gagagagggt aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800
 ttagagaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaaccccaat tttgatgtat 1000
 ggattacttt tttttngcn cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.
 <220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr
 1 5 10 15
 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe
 20 25 30
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
65 70
Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
80 85 90
Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
95 100 105
Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
110 115 120
Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
125 130 135
Asn Met Val

<210> 154
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 66
<223> unknown base

<400> 154
gaagacgtgg cggtctctgc ctgggctgtt tcccggttc atttctccg 50
actcagcttc ccacntggg ctttccgagg tgccttcgcc gctgtcccca 100
ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150
ttaaccggat ttggagtgtt tttcctgttc ttggaatga ttctcttttt 200
tgacaaagca ctactggcta ttggaatgt tttatttga gccggcttgg 250
cttttgtaat tgggttagaa agaacattca gattcttctt caaaaaacat 300
aaaatgaaag ctacagggtt ttttctgggt ggtgtatttg tagtcttat 350
tggttgccct ttgataggca tgatcttcca aatttatgga ttttttctct 400
tgctc 405

<210> 155
<211> 1781
<212> DNA
<213> Homo sapiens

<400> 155
ggcacgaggc tgaaccagc cggtccatc tcagcttctg gtttctaagt 50
ccatgtgccca aaggctgccca ggaaggagac gccttctcta gtcctggatc 100
tttcttctct ctggaatatc ttgactgtgg gtagttattt atttctgaat 150
aagagcgtcc acgcatcatg gacctcgagg gactgctgaa gtctcagttc 200
ctgtgccacc tgggtctctg ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctcttca ctctctctct ctggccatt aacaagcagc 300
 tcttccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgctgc tggagtggtg gtcgggcacg gaatgcacca tcttcaacga 400
 cccgcgcgcc tacctcaagt atgggaagga aaatgccatc gtggtttctca 450
 accacaagtt tgaaattgac tttctgtgtg gctggagcct gtccgaacgc 500
 tttgggtgtg tagggggctc caaggtcctg gccagaagaag agctggccta 550
 tgtcccaatt atcggctgga tgtgttactt caccgagatg gtcttctgtt 600
 cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650
 ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcaggtg gcccgggcca 750
 aggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggtctc 800
 gccatcacgg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcctaa 900
 acggaagaa ataccatgca gatttgtatg ttagggagat cccactggaa 950
 gacatccctg aagacgatga cgagtgtctg gcttggtgcg acaagctcta 1000
 ccaggagaag gatgcctttc agggaggagta ctacaggacg ggcaccttcc 1050
 cagagacgcc catggtgccc ccccgcgggc cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgtggtt gctctaccct tcttccagtt cctgggtcag 1150
 catgatcagg agcgggtctt cctgacgctt ggccagcttc atcctgtctt 1200
 tctttgtggc ctccgtggga gttcgtatga tgattggtgt gacggaaatt 1250
 gacaagggct ctgcctacgg caactctgac agcaagcaga aactgaatga 1300
 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtg 1350
 cctctgcata tctctcttag tgggacacgg tgacaaaggc tgggtgagcc 1400
 cctgtcgggc acggcggaag tcacgacctc tccagccagg gagtctgttc 1450
 tcaaggccgg atggggagga agatgttttg taatcttttt tccccatgt 1500
 gcttttagtg gctttggtt tctttttgtg cgagtgtgtg tgagaatggc 1550
 tgtgtgtga gtgtgaactt tgttctgtga tcatagaaa ggtattttag 1600
 gctgcagggg agggcagggc tggggaccga aggggacaag ttcccccttc 1650
 atccttttgt gctgagtttt ctgtaaccct tgggtgccag agataaagtg 1700
 aaaagtgtt taggtgagat gactaaatta tgccccaag aaaaaaaaaa 1750
 taagtgtctt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Iys	Ser	Gln	Phe	Leu	Cys	His	Leu	1	5	10	15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	20	25	30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	35	40	45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	50	55	60	
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	65	70	75	
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	80	85	90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	95	100	105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	110	115	120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	125	130	135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	140	145	150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	155	160	165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	170	175	180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	185	190	195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	200	205	210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	215	220	225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	230	235	240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	245	250	255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	260	265	270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	275	280	285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val				

	290		295		300									
Pro	Pro	Arg	Arg	Pro	Trp	Thr	Leu	Val	Asn	Trp	Leu	Phe	Trp	Ala
				305										315
Ser	Leu	Val	Leu	Tyr	Pro	Phe	Phe	Gln	Phe	Leu	Val	Ser	Met	Ile
				320					325					330
Arg	Ser	Gly	Ser	Ser	Leu	Thr	Leu	Ala	Ser	Phe	Ile	Leu	Val	Phe
				335					340					345
Phe	Val	Ala	Ser	Val	Gly	Val	Arg	Trp	Met	Ile	Gly	Val	Thr	Glu
				350					355					360
Ile	Asp	Lys	Gly	Ser	Ala	Tyr	Gly	Asn	Ser	Asp	Ser	Lys	Gln	Lys
				365					370					375
Leu	Asn	Asp												

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
 ctgagcgcg gcgtagcatgg agggggagag tacgtcggcg gtgctctcgg 50
 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaagt tggtttatata attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaatg tcaaaaagaa 300
 tgtggtaggt tggtaacaat tccgtcgtca ttcagatcag atcatgaagt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccaa 400
 gaccttgttt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggacttttcc 500
 acagggtacc ttagtggtt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcaggttc ctgtatgtcc actggtttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagacctca ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaattctg aatttcttca 900
 ttcattgtgt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccattctgat gtagtagaca atctgacctt aatggtagaa 1000
 cacactgaca ttctgaagc tagtccagct agtacaccac aaatcattaa 1050
 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggg 1100
 tgttagatag acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150
 caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
 aaagatgaag ggttttgggt aatattcacg gtctcctaca ttttgatcct 1250
 ttttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300
 atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350
 ttactatgt tcacctgttt gcagtaatac acagataact cttagtgcac 1400
 ttacttcaca aagtactttt tcaaacatca gatgctttta ttccaaaacc 1450
 tttttttcac ctttactaa gttgttgagg ggaaggctta cacagacaca 1500
 ttctttagaa ttggaaggt gagaccaggc acagtggctc acacctgtaa 1550
 tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600
 tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650
 atggaagc aagaatagcc ttattttcaa aatatggaag gaaatttata 1700
 tgaataatta tctgagtcac taaaattctc cttaagtgat acttttttag 1750
 aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800
 aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met	Glu	Gly	Glu	Ser	Thr	Ser	Ala	Val	Leu	Ser	Gly	Phe	Val	Leu
1				5					10					15
Gly	Ala	Leu	Ala	Phe	Gln	His	Leu	Asn	Thr	Asp	Ser	Asp	Thr	Glu
				20					25					30
Gly	Phe	Leu	Leu	Gly	Glu	Val	Lys	Gly	Glu	Ala	Lys	Asn	Ser	Ile
				35					40					45
Thr	Asp	Ser	Gln	Met	Asp	Asp	Val	Glu	Val	Val	Tyr	Thr	Ile	Asp
				50					55					60
Ile	Gln	Lys	Tyr	Ile	Pro	Cys	Tyr	Gln	Leu	Phe	Ser	Phe	Tyr	Asn
				65					70					75
Ser	Ser	Gly	Glu	Val	Asn	Glu	Gln	Ala	Leu	Lys	Lys	Ile	Leu	Ser
				80					85					90
Asn	Val	Lys	Lys	Asn	Val	Val	Gly	Trp	Tyr	Lys	Phe	Arg	Arg	His
				95					100					105

Ser Asp Gln Ile	Met Thr Phe Arg Glu Arg	Leu Leu His Lys Asn
110	115	120
Leu Gln Glu His	Phe Ser Asn Gln Asp	Leu Val Phe Leu Leu Leu
125	130	135
Thr Pro Ser Ile	Ile Thr Glu Ser Cys Ser	Thr His Arg Leu Glu
140	145	150
His Ser Leu Tyr	Lys Pro Gln Lys Gly	Leu Phe His Arg Val Pro
155	160	165
Leu Val Val Ala	Asn Leu Gly Met Ser	Glu Gln Leu Gly Tyr Lys
170	175	180
Thr Val Ser Gly	Ser Cys Met Ser Thr	Gly Phe Ser Arg Ala Val
185	190	195
Gln Thr His Ser	Ser Lys Phe Phe Glu	Glu Asp Gly Ser Leu Lys
200	205	210
Glu Val His Lys	Ile Asn Glu Met Tyr	Ala Ser Leu Gln Glu Glu
215	220	225
Leu Lys Ser Ile	Cys Lys Lys Val Glu	Asp Ser Glu Gln Ala Val
230	235	240
Asp Lys Leu Val	Lys Asp Val Asn Arg	Leu Lys Arg Glu Ile Glu
245	250	255
Lys Arg Arg Gly	Ala Gln Ile Gln Ala	Ala Arg Glu Lys Asn Ile
260	265	270
Gln Lys Asp Pro	Gln Glu Asn Ile Phe	Leu Cys Gln Ala Leu Arg
275	280	285
Thr Phe Phe Pro	Asn Ser Glu Phe Leu	His Ser Cys Val Met Ser
290	295	300
Leu Lys Asn Arg	His Val Ser Lys Ser	Ser Cys Asn Tyr Asn His
305	310	315
His Leu Asp Val	Val Asp Asn Leu Thr	Leu Met Val Glu His Thr
320	325	330
Asp Ile Pro Glu	Ala Ser Pro Ala Ser	Thr Pro Gln Ile Ile Lys
335	340	345
His Lys Ala Leu	Asp Leu Asp Asp Arg	Trp Gln Phe Lys Arg Ser
350	355	360
Arg Leu Leu Asp	Thr Gln Asp Lys Arg	Ser Lys Ala Asn Thr Gly
365	370	375
Ser Ser Asn Gln	Asp Lys Ala Ser Lys	Met Ser Ser Pro Glu Thr
380	385	390
Asp Glu Glu Ile	Glu Lys Met Lys Gly	Phe Gly Glu Tyr Ser Arg
395	400	405
Ser Pro Thr Phe		

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
 ggacacagccg cgcggcggag ggcagagtca gccagagccga gtcacagccgg 50
 acgagcggac cagcgcaggg cagcccaagc agcgcgcagc gaacgcccgc 100
 cgcgcgccac accctctcgc gtccccgcgg cgcctgccac ccttccctcc 150
 ttccccgcgt ccccgccctc cgggccagtc agcttgccgg gttcgtgcc 200
 ccgcgaaacc ccgaggtcac cagccccgcg ctctgcttcc ctgggcgcgg 250
 cgcgcctcc acgcctcctc tctccccctg cccgggcctc ggcaccgggg 300
 accgttgctc gacgcgaggc ccagctctac ttttgcctcc cgtctcctc 350
 cgcctgctc cctcttccac caactccaac tcttctctcc tccagctcca 400
 ctgcgtagtc cccgactccg ccagccctc gcccgctgcc gtacgcgccg 450
 ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg ccgcaccat 500
 ggacaggttc ggcttgcccg cgtctctctc caccctggca gtgcacagc 550
 ccgcgctgct ggctgccgag ctcaagtcga aaagttgctc ggaagtgcga 600
 cgtctttacg tgtccaaagg ctccaacaag aacgatgccc cctccaacga 650
 gatcaacggt gatcatttga agatctgtcc ccagggttct acctgctgct 700
 ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750
 agtgtgttca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800
 ttacaagaag ttgatgaat tcttcaaga actacttgaa aatgcagaga 850
 aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
 aattctgagc tatttaaaga tctctctgta gagtgtgaaac gttactacgt 950
 ggtgggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000
 tcctggagcg gatgttccgc ctggtgaact ccagtagcca ctttacagat 1050
 gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100
 agatgtccct cgcgaattga agctccaggt tactcgtgct ttgtgacagc 1150
 ccgctacttt cgctcaaggc ttagcgggtg cgggagatgt cgtgagcaag 1200
 gtctccgttg taaacccac agcccagtg acccatgccc tgttgaagat 1250
 gatctactgc tcccaactgc ggggtctcgt gactgtgaag ccattgtaca 1300
 actactgtc aaacatcatg agaggctgtt tggccaacca aggggacttc 1350
 gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
 gctagagggt cctttcaaca ttgaatcgtt catggatccc atcagatgta 1450

agatttctga tgctattatg aacatgcagg ataatagtgt tcaagtgtct 1500
 cagaagggtt tccagggatg tggaccccc aagcccctcc cagctggacg 1550
 aatttctcgt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcaccccca ggaacgcccc accacagcag ctggcactag ttggaccga 1650
 ctggttactg atgtcaagga gaaactgaaa caggccaaga aattctggtc 1700
 ctccctccg agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750
 gcaatgagga tgactgttgg aatgggaaag gcaaaagcag gtacctgttt 1800
 gcagtgcag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850
 ggttgacacc agcaaaaccag acatactgat ccttcgtcaa atcatggctc 1900
 ttcgagtgat gaccagcaag atgaagaatg catacaatgg gaacgcgtg 1950
 gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
 atgctgggaa gagtgccaat gagaaagccg acagtgtcgg tgtccgtcct 2100
 ggggcacagg cctacctct cactgtcttc tgcactttgt tctcggttat 2150
 gcagagagag tggagataat tctcaaacct tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
 tttttaaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300
 ttttaagaag gctgactttg ttttctcatt cagttttggg agggaaaggg 2350
 actgtgcatt gagttgggtc ctgctccccc aaacatgttt aaacgtggct 2400
 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgttgtatg tttttttctc atttcgtttg tgggtttttt 2500
 ttccaactg tgatctgcgc ttgtttotta caagcaaaac agggctccctt 2550
 ctggcacgt aacatgtacg tatttctgaa atattaaata gctgtacaga 2600
 agcaggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaaa 2650
 c 2651

<210> 160
 <211> 556
 <212> PRT
 <213> Homo sapiens

<400> 160
 Met Ala Arg Phe Gly Leu Pro Ala Leu Leu Cys Thr Leu Ala Val
 1 5 10 15
 Leu Ser Ala Ala Leu Leu Ala Ala Glu Leu Lys Ser Lys Ser Cys
 20 25 30
 Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

35										40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys					
				50					55					60					
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr					
				65					70					75					
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln					
				80					85					90					
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe					
				95					100					105					
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu					
				110					115					120					
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn					
				125					130					135					
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr					
				140					145					150					
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp					
				155					160					165					
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr					
				170					175					180					
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu					
				185					190					195					
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln					
				200					205					210					
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu					
				215					220					225					
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro					
				230					235					240					
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser					
				245					250					255					
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys					
				260					265					270					
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp					
				275					280					285					
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu					
				290					295					300					
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile					
				305					310					315					
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser					
				320					325					330					
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys					
				335					340					345					
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala					

350	355	360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr
365	370	375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys
380	385	390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser
395	400	405
Asn Val Cys Asn	Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu
410	415	420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala
425	430	435
Val Thr Gly Asn	Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val
440	445	450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile
455	460	465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn
470	475	480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly
485	490	495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu
500	505	510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu
515	520	525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu
530	535	540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp
545	550	555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 161
 ctccgtgcta aacccccacag ccc 23

<210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 162
 tcacatcgat gggatccatg accg 24

<210> 163
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 163
 ggtctcgtga ctgtgaagcc atgttacaac tactgtctaa acatcatgag 50

<210> 164
 <211> 870
 <212> DNA
 <213> Homo sapiens

<400> 164
 ctgcgcccca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
 gctgagtgatc ctgacctgag tcatcccag ggatcaggag cctccagcag 100
 ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150
 cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
 atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
 ggaccgaggg caggcttcta ggagatggct ccaggaaggg ggccaagaat 300
 gtgagtgcga agattgggtc ctgagagccc cgagaagaaa attcatgaca 350
 gtgtctgggc tgocaaagaa gcagtgcccc tgtgatcatt tcaagggcga 400
 tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
 ccagagcctg ccagcaattt ctcaacaat gtcagctaag aagctttgct 500
 ctgcctttgt aggagctctg agcgcccact cttccaatta aacattctca 550
 gccagaaga cagtgagcac acctaccaga cactcttctt cttccacctc 600
 actctccac tgtaaccacc cctaatcat tcagtgctc tcaaaaagca 650
 tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700
 cgtcagtcct agcctgtgcc ctccccttac ccaggtctag gcttaattac 750
 ctgaagatt ccaggaaact gtacttctct agctagtgtc atttaacett 800
 aatgcaatc aggaagtag caaacagaag tcaataaata tttttaaatg 850
 tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
 <211> 119
 <212> PRT
 <213> Homo sapiens

<400> 165
 Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Glu	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
 aatggctgtc ttagtacttc gcctgacagt tgtcctggga ctgcttgtct 50
 tattcctgac ctgctatgca gacgacaaac cagacaagcc agacgacaag 100
 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300
 tccaagagca gccaaatcct gcttttccag tttggtccca caagtccctcc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaagg ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe				
	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala					
	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met					
	65		70		75
Glu Phe Asp Asp Asp Glu Gly Lys His Ser Ser Lys					
	80		85		

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
 ggacgccagc gctgtcagag gctgagcag gaaaaagcca gtgccccagc 50
 ggaagcacag ctcagagctg gtctgccatg gacatcctgg tccactcct 100
 gcagctgctg gtgtgtcttc ttaccctgcc cctgcacctc atggtctctg 150
 tgggtgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcaattcta cccacggggc 350
 tgcaggggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtgggtg 450
 ctcttgagga ggacatgaga cagctggctg atggctccat ggatgtgggtg 500
 gtctgcactc tgggtgtgtg ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgtctctt ttctggggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggga gcaagttttc 650
 gagcccacct ggaacacat tggggatggc tgctgcctca ccagagagac 700
 ctggaaggat cttgagaacg ccagttctc cgaaatccaa atggaacgac 750
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaaag 800
 gctgtcaaac aatctttccc aagctccaag gcactcattt gtcctctccc 850
 cagcctccaa ttagaacaag ccacccacca gcctatctat cttccactga 900
 gaggggaccta gcgaatgag agaagacatt catgtaccac ctactagtcc 950
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tcccgcttcc 1000
 gacagtga aaagctctact tctacgtga cccagggagg aaacactagg 1050
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

gcctcccaat gttgtccctt tccttcgttc ccatggtaaa gctcctctcg 1150
 ctttcctcct gaggetacac ccatgcgtct ctaggaactg gtcacaaaaa 1200
 tcatgggtgcc tgcacccctg ccaagccccc ctgacctctc ctccccacta 1250
 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
 atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
 taataaatag acgaaaccac g 1371

<210> 169
 <211> 277
 <212> PRT
 <213> Homo sapiens

<400> 169
 Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu
 1 5 10 15
 Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro
 20 25 30
 Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro
 35 40 45
 Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser
 50 55 60
 Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu
 65 70 75
 Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro
 80 85 90
 Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys
 95 100 105
 Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu
 110 115 120
 Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp
 125 130 135
 Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val
 140 145 150
 Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg
 155 160 165
 Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr
 170 175 180
 Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp
 185 190 195
 Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys
 200 205 210
 Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln
 215 220 225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240
 Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255
 Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270
 Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
 gtgggattta tttgagtga agatcgtttt ctcagtggtg gtggaagttg 50
 cctcatcgca ggcagatggt ggggctttgt ccgaacagct cccctctgcc 100
 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgt 200
 ctctctttac tggttttgca ccataacttc ctcagcttga gcagtttgtt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtccaaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
 cctgtggtca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtctgggct caacagtgat 500
 tccctgaaaa gcacagata caaaattgtc aattttgacc ctaaaacttt 550
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
 taacctttgc aaggttctac ttgccaattc tggttccagc cgcagaaga 650
 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgcctt 700
 ttacaataca gcactgaagc caggacatgc agctgcattt tcagaagatt 750
 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtag 800
 aattacattg gctatcttga ctataaaaag gaaagaatcc gtaagctttc 850
 catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaac 900
 tgacggaatg gaaacgacag aatataacta accaactgga aaatggatg 950
 aaactcaatg tagaaggagg actgtatagc agaaccctgg ctggtagcat 1000
 cacaacacct cctctgctta tcgtatttta tcaacagcac tctaccatcg 1050
 atcctatgtg gaatgtccgc caccttggtt ccagtgtgtg aaaacgatat 1100
 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
 atctcaaaca taaagtgaag cagaatttga actgtaagca agcattttctc 1300
 aggaagtctt ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
 atgacaaact gcctgtctg gcagtcagct tcccagacag actatagact 1450
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
 aatgactgga aagaagaact gatatggcta gttcagctag ctgggtacaga 1550
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600
 taaataaaac ttacattttt c 1621

<210> 171
 <211> 371
 <212> PRT
 <213> Homo sapiens

<400> 171
 Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val 15
 1 5 10
 Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser 30
 20 25
 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro 45
 35 40
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp 60
 50 55 60
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp 75
 65 70
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn 90
 80 85 90
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr 105
 95 100
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser 120
 110 115
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly 135
 125 130
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu 150
 140 145
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys 165
 155 160
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile 180
 170 175
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala

	185		190		195
Phe Ser Glu Asp	Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg			
	200		205		210
Gly Ala Gly Asn	Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr Lys			
	215		220		225
Lys Glu Arg Ile	Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys Ser			
	230		235		240
Phe Asn Pro Gly	Val Phe Val Ala Asn	Leu Thr Glu Trp Lys Arg			
	245		250		255
Gln Asn Ile Thr	Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn Val			
	260		265		270
Glu Glu Gly Leu	Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr Thr			
	275		280		285
Pro Pro Leu Leu	Ile Val Phe Tyr Gln	Gln His Ser Thr Ile Asp			
	290		295		300
Pro Met Trp Asn	Val Arg His Leu Gly	Ser Ser Ala Gly Lys Arg			
	305		310		315
Tyr Ser Pro Gln	Phe Val Lys Ala Ala	Lys Leu Leu His Trp Asn			
	320		325		330
Gly His Leu Lys	Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp Val			
	335		340		345
Trp Glu Lys Trp	Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn Leu			
	350		355		360
Ile Arg Arg Tyr	Thr Glu Ile Ser Asn	Ile Lys			
	365		370		

<210> 172
 <211> 585
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 71, 76, 86, 91, 162, 220, 269, 281
 <223> unknown base

<400> 172
 tgggtttttgc cccataaatt ccctcagctt gagcagtttg ttaaggaatg 50
 aggttacaga ttcaggaatt ntaggncctc aacctntaga ntttgtccca 100
 aatgttctcc gacatgcagt agatggggaga caagaggaga ttctgttggt 150
 catcgctgca tntgaagaca ggottggggg ggccattgca gctataaaca 200
 gcatttcagca caaactcogn tccaatgtga ttttctacat tgttactctc 250
 aacaatacag cagacatnt cgggtcctgg ntcaacagtg attccctgaa 300
 aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400
gcaaggttct acttgccaat totggttccc agcgcaaaga aggccatata 450
catgatgat gatgtaattg tgcaagtgga tattcttgcc ctttacaata 500
cagcactgaa gccaggacat gcagctgcat tttcagaaga ttgtgatcca 550
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173
<211> 1866
<212> DNA
<213> Homo sapiens

<400> 173
cgacgctcta gcggttaccg ctgcgggctg gctgggcgta gtggggctgc 50
gcggctgccca cggagctaga gggcaagtgt gctcggccca gcgtgcaggg 100
aacgcgggag gccagacaac gggctgggct ccggggcctg cggcgcgggc 150
gctgagctgg cagggcgggt cggggcgcgg gctgcatccg catctcctcc 200
atcgctgca gtaaggcgcg cgcggcgag cctttgaggg gaacgacttg 250
tcggagccct aaccaggggt gtctctgagc ctgggtggat ccccgagagc 300
tcacatcact ttccgacac ttcaaatggt ttaaaaacta atatttatat 350
gacagaagaa aaagatgtca ttccgtaag taaacatcat catcttggtc 400
ctgggctggt gctctcttct tactggtttt gcaccataac ttccctagct 450
tgaggcagtt tgtaaggaa tgaggttaca gattcaggaa ttgtagggcc 500
tcaacctata ggaatttgct ccaaatgctc tccgacatgc agtagatggg 550
agacaagagg agattcctgt ggtcatcgct gcatctgaag acaggcctgg 600
gggggccatt gcagctataa acagcattca gcacaacact cgtcccaatg 650
tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700
tgggtctaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750
ttgaccctaa acttttggaa ggaaaagtaa aggaggatcc tgaccagggg 800
gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850
ttcccagcgc aaagaaggcc atatacatgg atgatgatgt aattgtgcaa 900
ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950
tgcattttca gaagatttgt attcagcctc tactaaagtt gtcacccgtg 1000
gagcaggaaa ccagtacaat tacattggct atcttgacta taaaaggaa 1050
agaattcgta agcttttcat gaaagccagc acttgctcat ttaatcctgg 1100
agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
aactgaaaaa atggatgaaa ctcaatgtag aagagggact gtagatgaga 1200

accttgctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250
 acagcactct accatcgatc ctatgtggaa tgtccgccac cttggttcca 1300
 gtgctggaaa acgatattca cctcagtttg taaaggctgc caagtactc 1350
 cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400
 tgtttgggga aaaatgggtat attccagacc caacaggcaa attcaacct 1450
 atccgaagat ataccgagat ctcaaacata aagtgaacaa gaatttgaac 1500
 tgtaagcaag cattttctcag gaagtcctgg aagatagcat gcgtgggaag 1550
 taacagttgc taggcttcaa tgcctatcgg tagcaagcca tggaaaaaga 1600
 tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650
 ccagacagac tatagactat aaatatgtct ccatctgcct taccagtggt 1700
 tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750
 tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800
 aacctgtggc ctgatctgta aataaaactt acatttttca ataggtaaaa 1850
 aaaaaaaaa aaaaaa 1866

<210> 174
 <211> 823
 <212> DNA
 <213> Homo sapiens

<400> 174
 ctgcaggtag acatctccac tgcccaggaa tcaactgagcg tgcagacagc 50
 acagcctcct ctgaaggccg gccataccag agtcctgcct cggcatgggc 100
 ctccaccattg aggcagctcc actgtctgtg ctggtctgag ggtgctgcct 150
 gtcattggggg cagccatctc ccaggggggc ctcatcgcca tcgtctgcaa 200
 cggctcgtg ggtctcttgc tgctgctgct ctgggtcact ctctgctggg 250
 cctgccattc tegtctgccg acgttgactc tctctctgaa tccagtccca 300
 actccagccc tggccccctgt cctgagaagg cccaccacc ccagaagccc 350
 agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400
 tggagcccag gacctaaatc cacctcacct agagcctgga attagtagtc 450
 cagagtccag ccagcctggg gtccagaact caagagtccg cctgcttgga 500
 gctggaccca gcggcccaga gtctagccag cttggctcca ataggagtc 550
 agtggcccta aggagatggg cctgggggtg gggcttatga gttggtgcta 600
 gagccagggc catctggact atgtccatc ccaagggccca agggtcaggg 650
 gcgggttcca ctctttccct aggtgagca cctctaggcc ctctaggttg 700
 gggaaagaaa ctggaaccca tggcaataat aggagggtgt ccaggctggg 750

ccccctccctt ggtcctccca gtgtttgctg gataataaat ggaactatgg 800

ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met	Gly	Ala	Ala	Ile	Ser	Gln	Gly	Ala	Leu	Ile	Ala	Ile	Val	Cys
1				5					10					15

Asn	Gly	Leu	Val	Gly	Phe	Leu	Leu	Leu	Leu	Leu	Trp	Val	Ile	Leu
			20						25					30

Cys	Trp	Ala	Cys	His	Ser	Arg	Leu	Pro	Thr	Leu	Thr	Leu	Ser	Leu
			35						40					45

Asn	Pro	Val	Pro	Thr	Pro	Ala	Leu	Ala	Pro	Val	Leu	Arg	Arg	Pro
			50						55					60

His	His	Pro	Arg	Ser	Pro	Ala	Met	Lys	Ala	Ala	Thr	Cys	Cys	Ser
			65						70					75

Pro	Glu	Gly	Pro	Trp	Pro	Ser	Leu	Glu	Pro	Arg	Thr
			80						85		

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

gtttgaattc ctccaactat acccacagtc caaaagcaga ctactgtgt 50

cccagggtac cagttcctcc aagcaagtca ttcccttat ttaacogatg 100

tgtccctcaa acacctgagt gctactccct atttgcattc gttttgataa 150

atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg tatcctcgca ttagccttgt ctttggccat 250

gatgtttacc ttcagattca tcaccaccct tctgggttcac attttcattt 300

cattgggttat ttggggattg ttgtttgtct gcggtgtttt atgggtggtg 350

tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400

aaatatgaag tgcgtgctgg gggtttgctat cgtatccaca ggcacacagg 450

cagtgctgct cgtcttgatt tttgtttctc gaaagagaat aaaattgaca 500

gttgagcttt tccaatccac aaataaagcc atcagcagtg ctcccttctc 550

gctgttccag ccactgtgga catttgccat cctcattttc tcttgggtcc 600

tctgggtggc tgtgctgctg agcctgggaa ctgcaggagc tgcccaggtt 650

atggaaggcg gccaaagtga atataagccc ctttcgggca ttccgtacat 700

gtggctgtac catttaattg gctcatctg gactagttaa ttcacacctg 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800
 agaagtaaaa atgatcctcc tgatcatccc atccttctgt ctctctccat 850
 tctctcttcc taccatcaag gaaccgttgt gaaagggatc tttttaatat 900
 ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950
 aaagaacagc agcatgggtc attgtccagg tacctgttcc gatgctgcta 1000
 ctgctgtttc tgggtgtctg acaataacct gctccatctc aaccagaatg 1050
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100
 gatgcattca aaatctgtgc caagaactca agtcacttta catctattaa 1150
 ctgctttgga gacttcataa tttttctagg aaaggtgtta gtggtgtgtt 1200
 tcaactgttt tggaggactc atggctttta actacaatcg ggcattccag 1250
 gtgtgggcag tccctctggt attggtagct tttttgcct acttagtagc 1300
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350
 gttttgctgt tgatctgga acaaatgatg gatcgtcaga aaagccctac 1400
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaattataa 1450
 caatgcaagg gcacagcagg acaagcactc attaaggaat gaggaggaaa 1500
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600
 tagagaaaag ttagtgaatt ttttttataa agacctataa aacctattc 1650
 ttcctcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
 Met Ser Gly Arg Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu
 1 5 10 15
 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
 20 25 30
 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu
 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

	95		100		105
Glu Leu Phe Gln	Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro	Phe		
	110		115		120
Leu Leu Phe Gln	Pro Leu Trp Thr Phe	Ala Ile Leu Ile Phe	Phe		
	125		130		135
Trp Val Leu Trp	Val Ala Val Leu Leu	Ser Leu Gly Thr Ala	Gly		
	140		145		150
Ala Ala Gln Val	Met Glu Gly Gly Gln	Val Glu Tyr Lys Pro	Leu		
	155		160		165
Ser Gly Ile Arg	Tyr Met Trp Ser Tyr	His Leu Ile Gly Leu	Ile		
	170		175		180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile	Ala		
	185		190		195
Gly Ala Val Val	Thr Cys Tyr Phe Asn	Arg Ser Lys Asn Asp	Pro		
	200		205		210
Pro Asp His Pro	Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe	Tyr		
	215		220		225
His Gln Gly Thr	Val Val Lys Gly Ser	Phe Leu Ile Ser Val	Val		
	230		235		240
Arg Ile Pro Arg	Ile Ile Val Met Tyr	Met Gln Asn Ala Leu	Lys		
	245		250		255
Glu Gln Gln His	Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys	Cys		
	260		265		270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu	Asn		
	275		280		285
Gln Asn Ala Tyr	Thr Thr Thr Ala Ile	Asn Gly Thr Asp Phe	Cys		
	290		295		300
Thr Ser Ala Lys	Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser	Ser		
	305		310		315
His Phe Thr Ser	Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe	Leu		
	320		325		330
Gly Lys Val Leu	Val Val Cys Phe Thr	Val Phe Gly Gly Leu	Met		
	335		340		345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln	Val Trp Ala Val Pro	Leu		
	350		355		360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu	Val Ala His Ser Phe	Leu		
	365		370		375
Ser Val Phe Glu	Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe	Ala		
	380		385		390
Val Asp Leu Glu	Thr Asn Asp Gly Ser	Ser Glu Lys Pro Tyr	Phe		
	395		400		405
Met Asp Gln Glu	Phe Leu Ser Phe Val	Lys Arg Ser Asn Lys	Leu		

410	415	420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu		
425	430	435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg		
440	445	

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
 gttcgattag ctcctctgag aagaagagaa aaggttcttg gacctctccc 50
 tgtttcttcc ttagaataat ttgtatggga tttgtgatgc aggaaagcct 100
 aagggaaaaa gaataattcat tctgtgtggt gaaaattttt tgaaaaaaa 150
 attgccttct tcaaacaaagg gtgtcattct gatatttatg aggactgttg 200
 ttctcactat gaaggcatct gttattgaaa tgttccttgt tttgctggtg 250
 actggagtac attcaaacaa agaaacggca aagaagatta aaaggcccaa 300
 gttcactgtg cctcagatca actgcgatgt caaagccgga aagatcatcg 350
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaaga ccccaataac 400
 catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450
 tgccgtacac agtgggtgtgc ttgataattc aggaggggaa atactgtgtc 500
 ggaaggttgc tggacagtct ggttacaaag ggagttattc caacggtgtc 550
 caatcgttat cctaaccacg atggagagaa tcctttatcg tcttagaaaag 600
 taaaccacaaa aagggtgtaa cctacccatc agctcttaca tactcatcat 650
 cgaaaagtcc agctgcccaa gcaggtgaga ccacaaaagc ctatcagagg 700
 ccacctattc cagggaacaac tgcacagccg gtcactctga tgcagcttct 750
 ggctgtcact gtagctgtgg ccacccccac caccttgcca aggccatccc 800
 cttctgctgc ttctaccacc agcatcccca gaccacaatc agtgggccac 850
 aggagccagg agatggatct ctggtccact gccacctaca caagcagcca 900
 aaacaggccc agagctgac caggtatcca aaggcaagat ccttcaggag 950
 ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttgttcca 1000
 aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050
 aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100
 gcaaacggcg attccgaatc cagaagcagc tctggctga tgttgcccaa 1150
 gctcttgaca ttggccctgc cgggtccactg atgggtgttg tccagtatgg 1200
 agacaacctt gctactcact ttaacctcaa gacacacacg aattctcagag 1250

atctgaagac agccatagag aaaattactc agagaggagg actttctaata 1300
 gtaggctcggg ccatctcctt tgtgaccaag aacttctttt ccaagccaa 1350
 tggaacaga agcggggctc ccaatgtggt ggtggtgatg gtggatggct 1400
 ggccacgga caaagtggag gaggttcaa gacttgcgag agagtccagg 1450
 atcaacattt tcttcatcac cattgaaggt gctgctgaaa atgagaagca 1500
 gtatgtgtg gagcccaact ttgcaacaa ggccgtgtgc agaacaaacg 1550
 gcttctactc gctccacgtg cagagctggt ttggcctcca caagaccctg 1600
 cagcctctgg tgaagcgggt ctgcgacact gaccgcctgg cctgcagcaa 1650
 gacctgcttg aactcgctg acattggctt cgtcatcgac ggctccagca 1700
 gtgtggggac gggcaacttc cgcaccgtcc tccagtttgt gaccaacctc 1750
 accaaagagt ttgagatttc cgacacggac acgcgcacatc gggccgtgca 1800
 gtacacctac gaacagcggc tggagtgttg gttcgacaag tacagcagca 1850
 agcctgacat cctcaacgcc atcaagaggg tgggctactg gagtgtggc 1900
 accagcacgg gggctgccat caacttcgcc ctggagcagc tctcaagaa 1950
 gtccaagccc aacaagagga agttaatgat cctcatcacc gacgggaggt 2000
 cctacgacga cgtccggatc ccagccatgg ctgccatct gaaggagtg 2050
 atcacctatg cgataggcgt tgcctggggt gcccaagagg agctagaagt 2100
 cattgccact caccocgcca gagaccactc cttctttgtg gacgagtttg 2150
 acaacctcca tcagtatgtc cccaggatca tccagaacat ttgtacagag 2200
 ttcaactcac agcctcggaa ctgaattcag agcaggcaga gcaccagcaa 2250
 gtgctgcttt actaactgac gtgttgacc accccaccgc ttaatggggc 2300
 acgcacggtg catcaagtct tgggcagggc atggagaaaac aaatgtcttg 2350
 ttattattct ttgccatcat gctttttcat attccaaaac ttggagttag 2400
 aaagatgac acaaacgtat agaatgagcc aaaaggctac atcatgttga 2450
 ggggtcgtga gattttacat ttgacaatt gttttcaaaa taaatgttcg 2500
 gaatacagtg cagcccttac gacaggctta cgtagagctt ttgtgagatt 2550
 ttaagtgtg tatttctgat ttgaactctg taaccctcag caagtttcat 2600
 tttgtcatg acaatgtagg aattgctgaa ttaaatgttt agaaggatga 2650
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
 aaaaaaaaaa aaaaaaaaaa aag 2773

<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met
1				5					10					15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr
			20						25					30
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn
			35						40					45
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
			50						55					60
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
			65						70					75
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
			80						85					90
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg
			95						100					105
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly
			110						115					120
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val
			125						130					135
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu
			140						145					150
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr
			155						160					165
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln
			170						175					180
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala
			185						190					195
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr
			200						205					210
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu
			215						220					225
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg
			230						235					240
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala
			245						250					255
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val
			260						265					270
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu
			275						280					285
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly

	290		295		300
Ser Thr Ser Ile	Gly Lys Arg Arg Phe	Arg Ile Gln Lys Gln Leu			
	305	310			315
Leu Ala Asp Val	Ala Gln Ala Leu Asp	Ile Gly Pro Ala Gly Pro			
	320	325			330
Leu Met Gly Val	Val Gln Tyr Gly Asp	Asn Pro Ala Thr His Phe			
	335	340			345
Asn Leu Lys Thr	His Thr Asn Ser Arg	Asp Leu Lys Thr Ala Ile			
	350	355			360
Glu Lys Ile Thr	Gln Arg Gly Gly Leu	Ser Asn Val Gly Arg Ala			
	365	370			375
Ile Ser Phe Val	Thr Lys Asn Phe Phe	Ser Lys Ala Asn Gly Asn			
	380	385			390
Arg Ser Gly Ala	Pro Asn Val Val Val	Val Met Val Asp Gly Trp			
	395	400			405
Pro Thr Asp Lys	Val Glu Glu Ala Ser	Arg Leu Ala Arg Glu Ser			
	410	415			420
Gly Ile Asn Ile	Phe Phe Ile Thr Ile	Glu Gly Ala Ala Glu Asn			
	425	430			435
Glu Lys Gln Tyr	Val Val Glu Pro Asn	Phe Ala Asn Lys Ala Val			
	440	445			450
Cys Arg Thr Asn	Gly Phe Tyr Ser Leu	His Val Gln Ser Trp Phe			
	455	460			465
Gly Leu His Lys	Thr Leu Gln Pro Leu	Val Lys Arg Val Cys Asp			
	470	475			480
Thr Asp Arg Leu	Ala Cys Ser Lys Thr	Cys Leu Asn Ser Ala Asp			
	485	490			495
Ile Gly Phe Val	Ile Asp Gly Ser Ser	Ser Val Gly Thr Gly Asn			
	500	505			510
Phe Arg Thr Val	Leu Gln Phe Val Thr	Asn Leu Thr Lys Glu Phe			
	515	520			525
Glu Ile Ser Asp	Thr Asp Thr Arg Ile	Gly Ala Val Gln Tyr Thr			
	530	535			540
Tyr Glu Gln Arg	Leu Glu Phe Gly Phe	Asp Lys Tyr Ser Ser Lys			
	545	550			555
Pro Asp Ile Leu	Asn Ala Ile Lys Arg	Val Gly Tyr Trp Ser Gly			
	560	565			570
Gly Thr Ser Thr	Gly Ala Ala Ile Asn	Phe Ala Leu Glu Gln Leu			
	575	580			585
Phe Lys Lys Ser	Lys Pro Asn Lys Arg	Lys Leu Met Ile Leu Ile			
	590	595			600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val	Arg Ile Pro Ala Met Ala			

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675

Pro Arg Asn

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
 caggatgaac tggttgcagt ggctgctgct gctgcggggg cgctgagagg 50
 acacgagctc tatgccttcc cggtgctcca tcccgtccgg cctcctgtgc 100
 gcgctgctgc ctccagacca tggcgcccca ggcccgcagc gctccgcgcc 150
 agatcccgcc cactacagtt ttctctgac tctaattgat gcactggaca 200
 ccttgctgat ttggggaat gtctcagaat tccaaagagt ggtgaagtg 250
 ctccaggaca gcgtggactt tgatattgat gtgaagcct ctgtgttga 300
 aacaacatt cgagtggtag gaggaactct gtctgctcat ctgctctcca 350
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaata ctctcccag cctttcagac 450
 cccactggc atgccatatg gaacagtga cttacttcat ggctgaacc 500
 caggagagac cctgtcacc tgtacggcag ggattgggac cttcattgtt 550
 gaatttgcca cctgagcag cctcactggt gacccggtgt tcgaagatgt 600
 ggccagagtg gctttgatgc gcctctggga gagccggtca gatatcgggc 650
 tggctggcaa ccacattgat gtgctcactg gcaagtgggt ggcccaggac 700
 gcaggcatcg gggctggcgt ggactcctac tttgagtact tggtaaaagg 750
 agccatcctg ctccaggata agaagctcat ggccatgttc ctgagagata 800
 acaaaagccat ccggaactac acccgcttcg atgactggta cctgtggggt 850
 cagatgtaca aggggactgt gtccatgcca gtcttcagc ccttgagggc 900
 ctactggcct ggtcttcaga gctcattgg agacattgac aatgccatga 950
 ggaccttct caactactac actgtatgga agcagtttgg ggggctcccc 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
 cccacttcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgccca 1100
 cgggggatcc caccctccta gaactcgaa gagatgctgt ggaatccatt 1150
 gaaaaaatca gcaaggtgga gtgcggattt gcaacaatca aagatctcgc 1200
 agaccacaag ctggacaacc gcatggagtc gttcttctgc gccgagactg 1250
 tgaaataacct ctacctcctg tttgacccaa ccaacttcat ccacaacaat 1300
 ggggtccacct togacgcggt gatcaccccc tatggggagt gcatcctggg 1350
 ggctgggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400
 ccctgcactg ctgccagagg ctgaaggaag agcagtgagg ggtggaggac 1450
 ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500
 aaacactggt agttcggggc catgggaacc tcagcaagg ccaggaacac 1550
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600
 cagaaggtcc cactctcag ctgcccagc cagcccttca cctccaagtt 1650
 ggcatctact ggacaggttt tctagactc ctcataacca ctgataatt 1700
 tttttatttt tatttttttg aggcataaact ataataaatt gcttttggt 1750
 atcataaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
 Met Pro Phe Arg Leu Leu Ile Pro Leu Gly Leu Leu Cys Ala Leu
 1 5 10 15
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	440		445		450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu	Met		
	455	460	465		
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln	Lys		
	470	475	480		
Asn Thr Val Ser	Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro	Gly		
	485	490	495		
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg	Lys		
	500	505	510		
Pro Ala Lys Gln	Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln	Pro		
	515	520	525		
Phe Thr Ser Lys	Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp	Ser		
	530	535	540		

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagtacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctggggt tgggcagaaa ggagggtgct tcggagcccg ccttttctga 100
 gcttctctgg ccggtcttag aacaattcag gcttcgtcgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaagaaaac aatgttctag gtcaaaactga gtctacaaa 250
 tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300
 tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagccagtg atcgcgcctg gagaacagtg gtactattct 450
 gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 cccagcagc tgggtctcac tcaactgaagg tcctgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650
 ctcaaccatc cttaccggac ctgggatgga gatcaccaaa gatggcttcc 700
 acctggttat tgagctggag gacctggggc ccagtttga gttccttctg 750
 gcctactgga ggagggagcc tgggtgccgag gaacatgtca aaatggtag 800
 gagtgggggt attccagtc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttcgtgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca tccccctggt 950
 actggccctg tttgcctttg ttggttcoat gctgacctt gtggtcgtgc 1000
 cactgttcgt ctggaataat gcccggtgc tccagtactc ctgttgcccc 1050
 gtggtggtcc tcccagacac cttgaaaata accaattcac ccagaagt 1100
 aatcagctgc agaaggagg aggtggatgc ctgtgccacg cgtgtgatgt 1150
 ctctgagga actcctcagg gcctggatct cataggtttg cggaagggcc 1200
 cagggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gaggctgttg tctacaagtc tagaagcaac catcagaggc aggtgtgttt 1350
 gtctaacaga aactgactg aggcctaggg gatgtgacct ctgactggg 1400
 gggtgccact tgctggctga gcaaccctgg gaaaagtgc ttcattccctt 1450
 cggctctaag ttttctcacc tgtaatgggg gaattacct caccctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacaccacgc acttgoaagg ctagagggaa actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact ggggtgcttg gagagccac tttcccagaa 1700
 taatccttga gagaaaagga atcatgggag caatggtgtt gagttcactt 1750
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgtccttt tttctgttg taaagtacag 2000
 aattcagcaa ataaaaagg ccaccctggc caaaagcgtg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183

<211> 311

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-29

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu	
1					5				10					15	
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp	
				20					25					30	
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser	
				35					40					45	
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro	
				50					55					60	
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu	
				65					70					75	
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser	
				80					85					90	
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala	
				95					100					105	
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln	
				110					115					120	
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	

Val Gln Gly Glu Ala Ile Pro Leu Val	Leu Ala Leu Phe Ala Phe
230	235 240
Val Gly Phe Met Leu Ile Leu Val Val	Val Pro Leu Phe Val Trp
245	250 255
Lys Met Gly Arg Leu Leu Gln Tyr Ser	Cys Cys Pro Val Val Val
260	265 270
Leu Pro Asp Thr Leu Lys Ile Thr Asn	Ser Pro Gln Lys Leu Ile
275	280 285
Ser Cys Arg Arg Glu Glu Val Asp Ala	Cys Ala Thr Ala Val Met
290	295 300
Ser Pro Glu Glu Leu Leu Arg Ala Trp	Ile Ser
305	310

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
 tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50
 cctttctagc ttctctggccg gctctagaac aattcaggct tcgctgcgac 100
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150
 agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250
 tcatgtgggt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtcga ataccagggg gagtacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctgggtg ctactcact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550
 cattgggctc acagacctca gcctggagca tctggaagca tccctttaat 600
 agaaactcaa ccatccttac ccgacctggg atggagatca ccaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagtcc 700
 ttgtggccta ntggaggagg ggccaacccc ttgcggcgca aggggttngc 750
 gaacccttg cgccgcctgg ggtatctctc gagaaaagag aggcccaata 800
 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gttgtctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggtgg cggcgacggg 50
ggcagcggcg tggctgctcc tgtgggctgc ggcctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt acgcgggacg ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctggggccc ccaccacttt aacgtgctcg ccttcccctg caaccagtgt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgcccgccg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400
ctggtgccca tcctgccttc aagtacctgg ccagacttcc tgggaaggag 450
cccacotgga acttctgtaa gtacctagta gcccagatg gaaagtggtg 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaatggtg cttcaaaggg agagaccacc tgactctcct 700
 tcctttactc ttaggccatt ggtcccatca ttcttgtggg ggaataattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag ccgatacga cgtcttgcca 850
 acaaaaatgt gtggcaata gaagtatatc aagcaataat ctcccaccca 900
 aggcctctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgcga gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaagggtta gttgttgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala
 1 5 10 15
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala
 20 25 30
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180
Leu Leu Lys Arg	Glu Asp Leu		
	185		

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctgggcc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
 caacatccgg ggcaaaactgg tgtcgctgga gaagtaccgc ggatcggtgt 50

<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

<400> 193
 cggacgcgtg ggcggggccg gacgcagggc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgcctg gggaggctgt gcgccgggag ctgcgggggtg 100
 ctggggggccc gggccgccct ctctcggagt tggcaggaag ccaggttgca 150
 ggggtgtccg ttcctcagtt ccagagaggt ggatcgcatg gtctccacgc 200
 ccacgcggagg cctcagctac gttcaggggg gcacccaaaa gcattttaac 250
 agcaagactg tgggccagtg cctggagacc acagcacaga gggcccaga 300
 acgagaggcc ttggctgtcc tccatgaaga cgctcaggtg acctttgccc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct gacattgggc 400

ctctgcaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450
 ggtgtctcatg cagttggcca ccgccaggc gggcatcatt ctggtgtctg 500
 tgaacccagc ctaccaggct atggaactgg agtatgtcct caagaagggtg 550
 ggctgcaaag cccttgtgtt cccaagcaa ttcaagacc agcaatacta 600
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
 ccttgaagag tcagaggctc ccagatctga ccacagtcac ctccgttgga 700
 gcccttttgc cggggaccct gctcctggat gaagtgggtg cggctggcag 750
 cacacggcag catctggacc agctccaata caaccagcag ttctgtctct 800
 gccatgaccc catcaacatc cagttcacct cggggacaac aggcagcccc 850
 aagggggcca ccctctccca ctacaacatt gtcaacaact ccaacatttt 900
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950
 tcctgcccaa cccctgtac cattgcctgg gttccgtggc aggcacaaatg 1000
 atgtgtctga tgtacgggtc caccctcatc ctggcctctc ccatcttcaa 1050
 tggcaagaag gcactggagg ccatcagcag agagagaggg accttctctg 1100
 atggtacccc cagcatgttc gtggacattc tgaaccagcc agacttctcc 1150
 agttatgaca tctcgaccat gtgtggaggt gtcattgtcg ggtccctcgc 1200
 acctccagag ttgatccgag ccattcatca caagataaat atgaaggacc 1250
 tgggtggttc ttatggaacc acagagaaca gtcccgtagc attcgcgcac 1300
 ttccctgagg acaactgtga gcagaaggca gaaagcgtgg gcagaattat 1350
 gcctcacacg gagggccgga tcatgaacat ggaggcaggg acgctggcaa 1400
 agctgaacac gccgggggag ctgtgcatcc gagggtagct cgtcatgctg 1450
 ggctactggg gtgagcctca gaagacagag gaagcagtggt atcaggacaa 1500
 gtggtatttg acaggagatg tcgccacaat gaatgagcag ggccttctga 1550
 agatcgtggg ccgtctaaag gatatgatca tccggggtgg tgagaacatc 1600
 taccocgcag agctcgagga cttctttcac acacaccoga aggtgcagga 1650
 agtgcagggt gtgggagtg aggacgatcg gatgggggaa gagatttgtg 1700
 cctgcattcg gctgaaggac ggggagagga ccacggtgga ggagataaaa 1750
 gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800
 gttttgtaca aactaccccc tcaccatttc aggaagatc cagaaattca 1850
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900
 gcctgtctcg gccggttgcc ttgactctct cctgtcagaa tgcaacctgg 1950
 ctttatgcac ctatgtgtcc ccagcaccga gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
 aaetgcgctg ggcacaagggt gccaaaaggc aggcagcctg cccaggccct 2100
 ccctcctgtc catccccccac attcccctgt ctgtccttgt gatttggcat 2150
 aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194
 <211> 615
 <212> PRT
 <213> Homo sapiens

<400> 194
 Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala
 1 5 10 15
 Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser
 20 25 30
 Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg
 35 40 45
 Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr
 50 55 60
 Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly
 65 70 75
 Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala
 80 85 90
 Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu
 95 100 105
 Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly
 110 115 120
 Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr
 125 130 135
 Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile
 140 145 150
 Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr
 155 160 165
 Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln
 170 175 180
 Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro
 185 190 195
 Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu
 200 205 210
 Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly
 215 220 225
 Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln
 230 235 240
 His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

245	250	255
Asp Pro Ile Asn	Ile Gln Phe Thr Ser Gly Thr Thr Gly Ser	Pro
260	265	270
Lys Gly Ala Thr	Leu Ser His Tyr Asn Ile Val Asn Asn Ser Asn	
275	280	285
Ile Leu Gly Glu	Arg Leu Lys Leu His Glu Lys Thr Pro Glu Gln	
290	295	300
Leu Arg Met Ile	Leu Pro Asn Pro Leu Tyr His Cys Leu Gly Ser	
305	310	315
Val Ala Gly Thr	Met Met Cys Leu Met Tyr Gly Ala Thr Leu Ile	
320	325	330
Leu Ala Ser Pro	Ile Phe Asn Gly Lys Lys Ala Leu Glu Ala Ile	
335	340	345
Ser Arg Glu Arg	Gly Thr Phe Leu Tyr Gly Thr Pro Thr Met Phe	
350	355	360
Val Asp Ile Leu	Asn Gln Pro Asp Phe Ser Ser Tyr Asp Ile Ser	
365	370	375
Thr Met Cys Gly	Gly Val Ile Ala Gly Ser Pro Ala Pro Pro Glu	
380	385	390
Leu Ile Arg Ala	Ile Ile Asn Lys Ile Asn Met Lys Asp Leu Val	
395	400	405
Val Ala Tyr Gly	Thr Thr Glu Asn Ser Pro Val Thr Phe Ala His	
410	415	420
Phe Pro Glu Asp	Thr Val Glu Gln Lys Ala Glu Ser Val Gly Arg	
425	430	435
Ile Met Pro His	Thr Glu Ala Arg Ile Met Asn Met Glu Ala Gly	
440	445	450
Thr Leu Ala Lys	Leu Asn Thr Pro Gly Glu Leu Cys Ile Arg Gly	
455	460	465
Tyr Cys Val Met	Leu Gly Tyr Trp Gly Glu Pro Gln Lys Thr Glu	
470	475	480
Glu Ala Val Asp	Gln Asp Lys Trp Tyr Trp Thr Gly Asp Val Ala	
485	490	495
Thr Met Asn Glu	Gln Gly Phe Cys Lys Ile Val Gly Arg Ser Lys	
500	505	510
Asp Met Ile Ile	Arg Gly Gly Glu Asn Ile Tyr Pro Ala Glu Leu	
515	520	525
Glu Asp Phe Phe	His Thr His Pro Lys Val Gln Glu Val Gln Val	
530	535	540
Val Gly Val Lys	Asp Asp Arg Met Gly Glu Glu Ile Cys Ala Cys	
545	550	555
Ile Arg Leu Lys	Asp Gly Glu Glu Thr Thr Val Glu Glu Ile Lys	

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr	
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu	Thr Ile Ser Gly Lys Ile	
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu	
605	610	615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac attttaggag agcgccctgaa actgcatgag aagacaccag 50
 agcagttgag gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccacc ctcctctggc 150
 ctctcccatc tccaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tggtcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat cagagccatc atcaacaaga 350
 taaatatgaa ggacctgggt gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tggggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500
 cagggacgct ggcaaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagaggaagc 600
 agtgatcag gacaagtgtt attggacagg agatgtgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcagggtg ccagggccat 50
 gatctggact gcaggctggc tgctgtgctg gctgcttcgc ggaggagcgc 100
 aggccttgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgcg ccggcggtgg acgtctgcac 200
 cgaggccgtg ggggcggtgg agaccatcca cggacaattc tcgctggcag 250
 tcgggggttg cggttcggga ctccccggca agaataccg cggcctggat 300
 cttcacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400
 atgagagtgc ataccgcccc aacggcggtg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgccca gggtagatcg ccgcgcgtcg tgagctgcta 500
 caacgccagc gatcatgtct acaagggtcg cttogacggc aacgtcacct 550
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcaactggga tggagtaaca ggcccagggt tcacgctcag 650
 tggctcctgt tgcacggggt cccgctgtaa ctctgacctc cgcaacaaga 700
 cctaattctc cctcgaatc ccaacccttg tccggtgcc cctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcgcccc 800
 agtgagacc acatccacca ccaaacccat gccagcgcca accagtcaga 850
 ctccgagaca gggagtagaa cacgagcct cccgggatga ggagccagg 900
 ttgactggag gcgcgcgtg ccaccaggac gcgagcaatt cagggcagta 950
 tcctgcaaaa ggggggcccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attgagcgc cttctgttgg ccgtggctgc tgggtgccta 1050
 ctgtgagctt cccacctgg aaatttccct ctacctaact tctctggccc 1100
 tgggtacccc tcttctcact acttctgtt cccaccactg gactgggctg 1150
 gccagcccc tgtttttoca acattcccca gtatcccag cttctgtgc 1200
 gctggttgc ggccttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgtcta gctttttgag gacagctcct gtatccttct cactcttgc 1300
 tctccgcttg tctcttgtg atgttaggac agagtggag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400
 tagccagcct ggactttgga gcgtgggggt ggtgggacaa tggctcccca 1450
 ctctaagcac tgccctccct actcccgcga tctttgggga atoggttccc 1500
 catatgtctt cettactaga ctgtgagctc ctcgaggggg ggcccggtag 1550
 ccaattcgcc ctatagttag tctga 1575

<210> 197
 <211> 346
 <212> PRT
 <213> Homo sapiens

<400> 197
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr
 1 5 10 15
 Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala
 20 25 30
 Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

	35	40	45
Pro Asn Lys Met	Lys Thr Val Lys Cys	Ala 55	Pro Gly Val Asp Val 60
Cys Thr Glu Ala	Val Gly Ala Val Glu Thr	70	Ile His Gly Gln Phe 75
Ser Leu Ala Val	Arg Gly Cys Gly Ser	Gly 85	Leu Pro Gly Lys Asn 90
Asp Arg Gly Leu	Asp Leu His Gly Leu	Leu 100	Ala Phe Ile Gln Leu 105
Gln Gln Cys Ala	Gln Asp Arg Cys Asn	Ala 115	Lys Leu Asn Leu Thr 120
Ser Arg Ala Leu	Asp Pro Ala Gly Asn	Glu 130	Ser Ala Tyr Pro Pro 135
Asn Gly Val Glu	Cys Tyr Ser Cys Val	Gly 145	Leu Ser Arg Glu Ala 150
Cys Gln Gly Thr	Ser Pro Pro Val Val	Ser 160	Cys Tyr Asn Ala Ser 165
Asp His Val Tyr	Lys Gly Cys Phe Asp	Gly 175	Asn Val Thr Leu Thr 180
Ala Ala Asn Val	Thr Val Ser Leu Pro	Val 190	Arg Gly Cys Val Gln 195
Asp Glu Phe Cys	Thr Arg Asp Gly Val	Thr 205	Gly Pro Gly Phe Thr 210
Leu Ser Gly Ser	Cys Cys Gln Gly Ser	Arg 220	Cys Asn Ser Asp Leu 225
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg	Ile 235	Pro Pro Leu Val Arg 240
Leu Pro Pro Pro	Glu Pro Thr Thr Val	Ala 250	Ser Thr Thr Ser Val 255
Thr Thr Ser Thr	Ser Ala Pro Val Arg	Pro 265	Thr Ser Thr Thr Lys 270
Pro Met Pro Ala	Pro Thr Ser Gln Thr	Pro 280	Arg Gln Gly Val Glu 285
His Glu Ala Ser	Arg Asp Glu Glu Pro	Arg 295	Leu Thr Gly Gly Ala 300
Ala Gly His Gln	Asp Arg Ser Asn Ser	Gly 310	Gln Tyr Pro Ala Lys 315
Gly Gly Pro Gln	Gln Pro His Asn Lys	Gly 325	Cys Val Ala Pro Thr 330
Ala Gly Leu Ala	Ala Leu Leu Leu Ala	Val 340	Ala Ala Gly Val Leu 345

Leu

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

<400> 198
 cgggactcgg cgggtcctcc tgggagtctc ggaggggacc ggctgtgcag 50
 acgccatgga gttggtgctg gtcttcctct gcagcctgct gggccccatg 100
 gtcctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggtcctct 200
 tctcggtttg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250
 aatcagaagc ccggggcccc aggagatgag gaagcccagg tggagaacct 300
 catcacccgc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
 catcaggtag aagcctctgg aacctgaggc ggctgcttga acctttggat 400
 gcaaagtctg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500
 cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 gcggtcctgc ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaactgtg gtctttgttg ctacttggtt gtggatgcta 650
 ttgtgtttgt tagtgaactg tggactcgct ttcccaggca ggggctgagc 700
 cacatggcca tctgtctctc cctgcccccg tggcctcca tcacctctg 750
 ctctaggag gctgcttggt gcccgagacc agccccctcc cctgatttag 800
 ggatgcgtag ggtgaagaca cgggcagtag tcttcagtcg tcttgggacc 850
 tgggaaggtt tgcagcactt tgtcatcatt cttcatggac tcttttact 900
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950
 tctcttagca actggagata caaagcaagg agctggtgag ccagcgttg 1000
 acgtcaggca ggctatgcc ttccgtggtt aatttcttcc caggggcttc 1050
 cacgaggagt ccccatctgc cccgccctt cacagagcgc ccggggattc 1100
 caggcccagg gcttctactc tgccccctgg gaatgtgtcc cctgcatac 1150
 ttctcagcaa taactccatg ggctctggga cctaccctc tccaaccttc 1200
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
 cagtcctctc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
 cttctctgcc tacgtccctc tagatgggca gcagaggcaa cttccgcatac 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcagagt ggggtggaga 1450
 ctccagcaggc tccgtgcagc ccttgggaac agtgagaggt tgaaggtcat 1500
 aacgagagtg ggaactcaac ccagatcccg cccctcctgt cctctgtgtt 1550
 cccgcggaaa ccaaccaaac cgtgcgctgt gacccattgc tgttctctgt 1600
 atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatacctt 1650
 gtttct 1657

<210> 199
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 199
 Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met
 1 5 10 15
 Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe
 20 25 30
 His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala
 35 40 45
 Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg
 50 55 60
 Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu
 65 70 75
 Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro
 80 85 90
 Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp
 95 100 105
 Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala
 110 115 120

<210> 200
 <211> 415
 <212> DNA
 <213> Homo sapiens

<400> 200
 aaacttgacg ccatgaagat cccggctcct cctgccgtgg tgctcctctc 50
 cctcctggtg ctccactctg cccaggggag caccctgggt ggtcctgagg 100
 aagaaagcac cattgagaat tatgcgtcac gacccgaggc ctttaacacc 150
 ccgttctcga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200
 cctgaactgg cacgccctct ttgagtctat caaaaggaaa cttoctttoc 250
 tcaactggga tgcccttctc aagctgaaag gactgaggag cgcaactcct 300
 gatgccagtg gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
 tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

```
Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
  1             5             10             15
Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Ala
          20             25             30
Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
          35             40             45
Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
          50             55             60
Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
          65             70             75
Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
          80             85             90
Leu Arg Ser Ala Thr Pro Asp Ala Gln
          95
```

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

```
cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50
ggtggagatt gcctttgcct cagtgttctt caccotgcctc tcccttctgg 100
cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150
acaggtccca aggccatggg agatctctcc tgtggtcttg ccggccactc 200
atgagagtgt ttttgtgtaa agtatctttt agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgccaagtgt tatgaggctt taggggaatg 300
tcaacctcca aatttttggt atactagatg gcttccattt acccaccact 350
attttaagggt ccccttatatt ttaggttcaa ggttcatttg acttgagaaa 400
gtgcctctct gcagcttcat tgattttggt tatcttccact attaattgta 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttatgtagt atccacaaaa tgtgattggt 550
aatttaaatg ttattctaatt attagtacat tcagttgtga tgtaaatgta 600
ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650
atttgtatag aaagactgaa tagtgatg 678
```

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagtgggtgg ctagctcgcc 50
 gcttcggctc tggctgctgt tgttcctcct gccctcagcg cagggccgcc 100
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgtcata gaagaggatc taactccttt ccgaggagcg atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggaccga ctatcatgatc 300
 actaagaaca gactgtaccg ggaatatgac tgcattgttc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttggaggt gatcgggggt ctccctgaca 400
 tggagatggt gatcaatgta cgagattatc ctacaggttc taaatggatg 450
 gagcctgccca tccagtcctt ctccttcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttga cattttggga agggggacct gctgtttggc 550
 caatttatcc tacaggtcct ggacgggtgg acctcttcag agaagatctg 600
 gtaagggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 ttcccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700
 ctcgaaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tgaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800
 tcttgggtat cactgcaaat acaagtatct gttaattttt cgaggcgtag 850
 ctgcaagttt ccggtttaa cactctcttc tgggtggctc acttgttttc 900
 catgttgggt atgagtggct agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atccagtcga aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaa at gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagt g aatactctaa attctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatgtt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct cttgtggca acagatctca 1250
 gatatcctac ggtgagaagc ttaccataag cttggtcct ataccttgaa 1300
 tatctgctat caagccaa at acctggtttt cttatcatg ctgacccag 1350
 agcaactctt gagaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaacccaac tctaccttc atttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcac cactgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccctttgtcc cattatttg agcagaaa at tgcatttg 1600
 gaagtagtac aactcattgc tgggaatttg aaattattca agcgtgac 1650
 tctgtcactt tattttaatg taggaaaccc tatgggttt atgaaaaata 1700
 cttggggatc attctctgaa tggctaaagg aagcgttagc catgccatgc 1750
 aatgatgtag gagttctct tttgaaacc ataaactctg ttactcagga 1800
 ggttctata atgccacata gaaagaggcc aattgcata gtaattattg 1850
 caattgatt tcaggttccc ttttgtgcc ttcatgcct acttctta at 1900
 gcctctctaa agccaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205

Met	Glu	Trp	Trp	Ala	Ser	Ser	Pro	Leu	Arg	Leu	Trp	Leu	Leu	
1				5				10					15	
Phe	Leu	Leu	Pro	Ser	Ala	Gln	Gly	Arg	Gln	Lys	Glu	Ser	Gly	Ser
				20				25					30	
Lys	Trp	Lys	Val	Phe	Ile	Asp	Gln	Ile	Asn	Arg	Ser	Leu	Glu	Asn
				35				40					45	
Tyr	Glu	Pro	Cys	Ser	Ser	Gln	Asn	Cys	Ser	Cys	Tyr	His	Gly	Val
				50				55					60	
Ile	Glu	Glu	Asp	Leu	Thr	Pro	Phe	Arg	Gly	Gly	Ile	Ser	Arg	Lys
				65				70					75	
Met	Met	Ala	Glu	Val	Val	Arg	Arg	Lys	Leu	Gly	Thr	His	Tyr	Gln
				80				85					90	
Ile	Thr	Lys	Asn	Arg	Leu	Tyr	Arg	Glu	Asn	Asp	Cys	Met	Phe	Pro

	95		100		105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly		
	110	115	120		
Arg Leu Pro Asp	Met Glu Met Val Ile	Asn Val Arg Asp Tyr	Pro		
	125	130	135		
Gln Val Pro Lys	Trp Met Glu Pro Ala	Ile Pro Val Phe Ser	Phe		
	140	145	150		
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp	Thr		
	155	160	165		
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr	Gly		
	170	175	180		
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser	Ala		
	185	190	195		
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe	Arg		
	200	205	210		
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu	Ser		
	215	220	225		
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Gln Tyr Thr Lys Asn	Gln		
	230	235	240		
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala	Lys		
	245	250	255		
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe	Asn		
	260	265	270		
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe	Leu		
	275	280	285		
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu	Phe		
	290	295	300		
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val	Lys		
	305	310	315		
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys	Ala		
	320	325	330		
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln	Phe		
	335	340	345		
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp	Glu		
	350	355	360		
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val	Thr		
	365	370	375		
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys	Thr		
	380	385	390		

Glu Leu

<210> 206

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
 caccctccca tttctcgcca tggccctgc actgctcctg atccctgctg 50
 ccctcgctc tttcatcctg gcccttgga ccgagtgga gttcgtgcgc 100
 ttacctccc ttcgccaact tcttgaggg atcccgaggt ctggtggtcc 150
 ggatgccgc cagggatggc tggtgccct gcaggaccgc agcatccttg 200
 cccctctggc atgggatctg gggtcctgc ttctatttctg tgggcagcac 250
 agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtacttttg 300
 ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttcgacg 350
 tggatgatcg gtactgggag ccataccca aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc cactgggtg ccgtcctctg gcttttgctg 450
 ccatgtcatc tcctggctcc tcctctttag catccttctc gcttttgact 500
 atgctgagct catgggctc aaacagggtat actaccatgt gctggggctg 550
 ggcgagctc tggccctgaa gtctcccggt gctctcagac tctctccca 600
 cctgcgccac ccagtgtgtg tggagtgctg gacagtgtg tgggtggtgc 650
 ctaccctggg caccgacgt ctctccttg ctttctctct taacctctac 700
 ctgggcctgg ctacggggt tgatcagcaa gacctcgtc acctccggg 750
 ccagctacaa agaaaactcc acctgctctc tcggcccgag gatggggagg 800
 cagagtgaag agctcaactt ggttacaagc cctgttcttc ctctccact 850
 gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900
 caaatccatg gactgaagga gatgccctt ctactacttg agactttatt 950
 ctctgggtcc agctccatac cctaaattct gagtctcagc cactgaactc 1000
 caaggtccac ttctaccag caaggaagag tggggatgag aagtcactgc 1050
 tcccttcaact gtttagagca tgacactctc cccctcaaca gccctctgag 1100
 aaggaaaagga tctgccctga cactccctc ggcactgtta cttgcctctg 1150
 cgctcagggt gtcctctct gcacogctgg ctccactcc aagaagggtg 1200
 accagggtct gcaagttcaa cggctcatagc tgcctccca ggcaccaacc 1250
 ttgcctcacc actccgggc ctagtctctg cactcctta ggcctgcct 1300
 ctgggctcag accccaacct agtcaagggt attctcctgc tcttaactgc 1350
 atgacttggg gtcctctgct ctcccgagga agatgctctg caggaaaata 1400
 aaagtcagcc tttttctaaa aaaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207
 Met Ala Pro Ala Leu Leu Leu Ile Pro Ala Ala Leu Ala Ser Phe
 1 5 10 15
 Ile Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser
 20 25 30
 Leu Arg Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp
 35 40 45
 Ala Arg Gln Gly Trp Leu Ala Ala Leu Gln Asp Arg Ser Ile Leu
 50 55 60
 Ala Pro Leu Ala Trp Asp Leu Gly Leu Leu Leu Phe Val Gly
 65 70 75
 Gln His Ser Leu Met Ala Ala Glu Arg Val Lys Ala Trp Thr Ser
 80 85 90
 Arg Tyr Phe Gly Val Leu Gln Arg Ser Leu Tyr Val Ala Cys Thr
 95 100 105
 Ala Leu Ala Leu Gln Leu Val Met Arg Tyr Trp Glu Pro Ile Pro
 110 115 120
 Lys Gly Pro Val Leu Trp Glu Ala Arg Ala Glu Pro Trp Ala Thr
 125 130 135
 Trp Val Pro Leu Leu Cys Phe Val Leu His Val Ile Ser Trp Leu
 140 145 150
 Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr Ala Glu Leu Met
 155 160 165
 Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly Leu Gly Glu Pro
 170 175 180
 Leu Ala Leu Lys Ser Pro Arg Ala Leu Arg Leu Phe Ser His Leu
 185 190 195
 Arg His Pro Val Cys Val Glu Leu Leu Thr Val Leu Trp Val Val
 200 205 210
 Pro Thr Leu Gly Thr Asp Arg Leu Leu Leu Ala Phe Leu Leu Thr
 215 220 225
 Leu Tyr Leu Gly Leu Ala His Gly Leu Asp Gln Gln Asp Leu Arg
 230 235 240
 Tyr Leu Arg Ala Gln Leu Gln Arg Lys Leu His Leu Leu Ser Arg
 245 250 255
 Pro Gln Asp Gly Glu Ala Glu
 260

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

ccgagcacag gagattgcct gcgttttagga ggtggctgctg ttgtgggaaa 50
agctatcaag gaagaaattg ccaaaccatg tcttttttct tgttttcaga 100
gtagttcaca acagatctga gtgttttaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcacatc ggaattccac agttttctta 200
gtcccttgga cccggttgac ctggttgctc tccccgctgg ctgctctatc 250
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggtctg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgctcttcc 350
gagtaggatg tcactgagat cctccaaatg gagcctcctg ctgctgtcac 400
tctgagttt ctttgtgatg tggtaacctc gccttcccca ctacaatgtg 450
atagaacgag tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaactcgc tctcatcaaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcaggcca ttagagttac ttgggggtgaa aaaaagtctt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggtgtaa aaggaagaca 700
aaatgttgcc attgtcctta gaggatgaac acctcttcta tggtgacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacat 800
tatggcattc aggtgggttaa ctgagttttg cccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcataaata ctggcaattt agtgaagat 900
cttttaaac taaaccactc agagaagttt ttcacaggtt atcctctaat 950
tgataattat tctatagag gattttacca aaaaacocat atttcttacc 1000
aggagtatcc tttcaaggtg ttccctccat actgcagtggt gttgggttat 1050
ataatgtcca gagatttggt gccaaagatc tatgaaatga tgggtcacgt 1100
aaaacccatc aagtttgaag atgtttatgt cgggactctgt ttgaatttat 1150
taaaagttaa cattcatatt ccagaagaca caaatctttt ctttctata 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
cttttcttcc aaggagatca tcactttttg gcaggctcat ctaaggaaca 1300
ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350
ataccttggt gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
ggaggtcagt gtgctggctt aactgaact gaaactcatg aaaaaccagg 1450
actggagact ggagggttac acttgtgatt tattagtcaag gcccttcaaa 1500

gatgatattgt	ggaggaatta	aatataaagg	aattggagggt	ttttgctaaa	1550
gaaattaata	ggaccaaaca	atttggacat	gtcattctgt	agactagaat	1600
ttctttaaag	ggtgttactg	agttataagc	tcactaggct	gtaaaaacaa	1650
aacaatgtag	agttttat	attgaacaat	gtagtcaact	gaagggtttg	1700
tgtatatctt	atgtggatta	ccaatttaaa	aatatatgta	gttctgtgtc	1750
aaaaaaactc	ttcactgaag	ttatactgaa	caaaatttta	cctgtttttg	1800
gtcattttata	aagtacttta	agatgttgca	gtatttcaca	gttattatta	1850
tttaaaatta	cttcaacttt	gtgtttttaa	atgttttgac	gatttcaata	1900
caagataaaa	aggatagtga	atcattcttt	acatgcaaac	attttccagt	1950
tacttaactg	atcagtttat	tattgatata	tcactcatt	aatgtaaggt	2000
catagggtcat	tattgcatat	cagtaatctc	ttggactttg	ttaaatattt	2050
tactgtggtta	atataagaaa	gaattaaagc	agaagaaatct	gaaaa	2095

<210> 209

<212> PRT

Met Ala

20 25 30

Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu
35 40 45

Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg

65 70 75

Gln Ash Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp
 60 85 90

Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Gly Lys Lys

100

110 115 120

Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp

Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gly Asp Phe Leu Asp

140 145 150

155 160 165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp
 170 175 180
 Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu
 185 190 195
 Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile
 200 205 210
 Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser
 215 220 225
 Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly
 230 235 240
 Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu
 245 250 255
 Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val
 260 265 270
 Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu
 275 280 285
 Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys
 290 295 300
 Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu
 305 310 315
 Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His
 320 325 330

Tyr

<210> 210
 <211> 745
 <212> DNA
 <213> Homo sapiens

<400> 210
 cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50
 gctggacttc ttggagtctt tctagctcct gccctagcta actataatat 100
 caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150
 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
 gactcctgga attccatctg ggattatgga aatggccttg ctgcaaccag 250
 actctttcaa aagaagacat gcattgtgca caaaatgaac aaggaaatga 300
 tgccctccat tcaatccctt gatgcaactgg tcaaggaaaa gaagcttcag 350
 ggtaaggggac caggaggacc acctcccaag ggctgatgt atcagtgcaa 400
 cccaaacaaa gtcgatgacc tgagcaaagt cggaaaaaac attgcaaaca 450
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
 ctgttttttt actcaggaac gtgctacacg accagtgtag tatggattgt 550

ggacatttcc ttctgtggag acacgggtgga gaactaaaca atttttttaa 600
 gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
 tccagtgggtt ttaccatgt cattotgaaa tttttctcta ctagtattgt 700
 ttgatttctt taagtttcaa taaatcatt tagcattgaa aaaaa 745

<210> 211
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 211
 Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu
 1 5 10 15
 Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
 20 25 30
 Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
 35 40 45
 His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
 50 55 60
 Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
 65 70 75
 Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
 80 85 90
 Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
 95 100 105
 Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Pro Lys Gly Leu Met
 110 115 120
 Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
 125 130 135
 Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
 140 145 150
 Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
 155 160 165
 Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
 170 175 180
 Asp Thr Val Glu Asn
 185

<210> 212
 <211> 1706
 <212> DNA
 <213> Homo sapiens

<400> 212
 catttctgaa actaatcgtg tcagaattga ctttgaaaag cattgctttt 50
 tacagaagta tattaacttt ttaggagtaa tttctagttt ggattgtaat 100

atgaaataat ttaaaagggc ttcgctcata tataggaaaa tcgcatatgg 150
 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
 ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
 gacagtcttc gaaccaatgt gtttggtcga tttcaaccag agactatagc 400
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccgttgccaa 450
 ctgctcccca ttgggtttctt ctttttggtg ctacagaaga ggaatccag 500
 gaaatctgca tagaacaact taggctttat accgaaaaaa agccaaacta 550
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600
 ccaaattaaa agcaaaggga ttgaatccgg atggaactcc agccctttca 650
 accctgggtg gattttctcc agcctccaag ccatcatcac caagagaagt 700
 aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750
 aagaacctga ggatagacaa caggcttcca aaagccctta caatgggtga 800
 agaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtcgatcgag 850
 gtcaagaaca cgatcacgtt ctagatcaca tactccaaga agacactata 900
 ataattaggcg gagtgcgtct ggaacataca gctcgagatc aagaagcagg 950
 tcccgcagtc acagtgaag cctcgaaga catcataatc atggttctcc 1000
 tcaccttaag gccaagcata ccagagatga tttaaaaagt tcaaacagac 1050
 atggtcataa aaggaaaaaa tctcgttctc gatctcagag caagtctcgg 1100
 gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150
 ggacaggcgt gaacgatctc gctcctttga gaggtcccat aaaagcaagc 1200
 accatggtgg cagtgcgtca ggacatggca ggcacaggcg ctgactttct 1250
 cttcctttga gctgcgatca gttcttggtt ttgcctatct acagtgtgat 1300
 gtatggactc aatcaaaaac attaaacgca aactgattag gatttggatt 1350
 cttgaaaccc tctaggtctc tagaacaactg aggacagttt cttttgaaaa 1400
 gaactatggt aatttttttg cacattaaaa tgccttagca gtatctaatt 1450
 aaaaaccatg gtcaggttca attgtaacttt attatagttg tgtattgttt 1500
 attgctataa gaactggagc gtgaattctg taaaaatgta tcttattttt 1550
 atacagataa aattgcagac actgttctat ttaagtgggt atttgtttta 1600
 atgatggtga atactttctt aacactgggt tgtctgcatg tgtaagatt 1650
 tttacaagga aataaaatac aaatcttggt ttttctaaaa aaaaaaaaaa 1700

aaaagt 1706

<210> 213

<211> 299

<212> FRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro	
1				5					10					15	
Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu	
				20					25					30	
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly	
				35					40					45	
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg	
				50					55					60	
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu	
				65					70					75	
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala	
				80					85					90	
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly	
				95					100					105	
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys	
				110					115					120	
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys	
				125					130					135	
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn	
				140					145					150	
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala	
				155					160					165	
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr	
				170					175					180	
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr	
				185					190					195	
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro	
				200					205					210	
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His	
				215					220					225	
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg	
				230					235					240	
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser	
				245					250					255	
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp	
				260					265					270	
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys	

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

tggggataaa ggaaaaatgg tcaggtatta atggcttaaa gattattgga 50
aggggtttat cattttttga anntattcgg gtcanaattg nctttgaaaa 100
gcattgcttt ttacagaaat atattancct tttagagtaa tttctagttt 150
ggattgtaat atgaaattat ttaaaagggc ttgcctcata tataggaaaa 200
tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250
ttaagagttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300
agaaaaaaga ataaagtaga ttgagctccc aattttatgt aagcttcaga 350
agaactggtt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400
ttacatgaat gacagctctc gaaccaatgt gtttggttoga tttcaaccag 450
agantatagc atgtgcttgc atctaccttg cagntagagc acttcagatt 500
ccgttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600
agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650
ttacaagaag ccnaattaaa agcaaaggga ttgaaatccg atggaactcc 700
agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

ggcacgaggc ctctggtcaca gcttggcacg aggggtgcacc gcgttctcgc 50
acgcgtcatg gcggtcctcg gagtacagct ggtggtgacc ctgctcaactg 100
ccaccctcat gcacaggctg ggcgcacact gctccttcgc gcgctggctg 150
ctctgtaacg gcagtttgtt ccgatacaag caccctgtctg aggaggagct 200
tcgggccctg gcggggaagc cgaggcccag aggcaggaaa gagcggtggg 250
ccaatggcct tagtgaggag aagccactgt ctgtgccccg agatgccccg 300

ttccagctgg agacctgccc cctcacgacc gtggatgccc tggctctgcg 350
 cttcttctctg gagtaccagt ggtttgtgga ctttgcctgt tactcggggc 400
 gcgtgtacct cttcacagag gcctactact acatgctggg accagccaag 450
 gagactaaca ttgctgtggt ctggtgcctg ctcacggtga ccttctccat 500
 caagatgttc ctgacagtga cacggctgta cttcagcgcc gaggaggggg 550
 gtgagcgctc tgtctgcctc acctttgctt tctcttctct getgctggcc 600
 atgctgggtg aagtgggtgc ggaggagacc ctcgagctgg gcttgaggcc 650
 tggctctggcc agcatgaccc agaacttaga gccacttctg aagaagcagg 700
 gctgggactg ggcgcttctc gtggccaagc tggctatccg cgtgggactg 750
 gcagtggtgg gctctgtgct gggtgccttc ctcaccttcc caggcctgcg 800
 gctggcccag acccaccggg acgcaactgac catgtcggag gacagaccga 850
 tgctgcagtt cctcctgcac accagcttcc tgtctccctt gttcatcctg 900
 tggctctgga caaagcccat tgcacgggac ttctctgacc agccgcctgt 950
 tggggagacg cgttttctcc tgtgttccga ttctgecttc gaetctgggg 1000
 gcctctggtt gctggtgggt ctgtgcctgc tgcggctggc ggtgacccgg 1050
 cccacctgc aggcctacct gtgcctggcc aaggccggg tggagcagct 1100
 gcgaaggag gctggccgca tcgaagccc tgaaatccag cagaggggtg 1150
 tccgagtcta ctgctatgtg accgtgggtg gcttgcagta cctgacggcg 1200
 ctcactctca cctcaactg cacacttctg ctcaagacgc tgggaggtga 1250
 ttctctgggc ctgggcccag ctctctact atccccgcac ccatctcag 1300
 ccagcgctgc cccatcggc tctggggagg acgaagtcca gcagactgca 1350
 gcgcggattg ccggggccct gggtggcctg cttactcccc tcttctctcg 1400
 tgggtctctg gctacactca tctgggtggc ggctgctgc cagctgctcg 1450
 ccagcctttt cggcctctac ttccaccagc acttgccagg ctctctagct 1500
 cctgcagacc ctctggggc cctgaggtct gttcctgggg cagcgggaca 1550
 ctgacctgcc cctctgtttt gcgccccgt gtccccagct gcaagtggtg 1600
 gccggactcc ccggcgcttc cttaccaca gtgcctgacc cgcggccccc 1650
 cttggacgcc gagtttctgc ctcagaactg tctctctctg gccacgacg 1700
 atgaggggtc cgaggccatt gtctccgaag cgtatgtgac aggtttgagt 1750
 ggcgaggggt atgctggctg ctctctgtaa caaataaagg agcatgccga 1800
 tttttaa 1807

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala
1				5					10					15
Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp
				20					25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
				35					40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
				50					55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
				65					70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
				80					85					90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
				95					100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
				110					115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
				125					130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
				140					145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
				155					160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
				170					175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
				185					190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
				200					205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
				215					220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
				230					235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
				245					250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
				260					265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
				275					280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

	290		295		300
Thr Arg Phe Ser	Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly Arg			
	305	310			315
Leu Trp Leu Leu	Val Val Leu Cys Leu	Leu Arg Leu Ala Val Thr			
	320	325			330
Arg Pro His Leu	Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg Val			
	335	340			345
Glu Gln Leu Arg	Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu Ile			
	350	355			360
Gln Gln Arg Val	Val Arg Val Tyr Cys	Tyr Val Thr Val Val Ser			
	365	370			375
Leu Gln Tyr Leu	Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr Leu			
	380	385			390
Leu Leu Lys Thr	Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro Ala			
	395	400			405
Pro Leu Leu Ser	Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro Ile			
	410	415			420
Gly Ser Gly Glu	Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile Ala			
	425	430			435
Gly Ala Leu Gly	Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly Val			
	440	445			450
Leu Ala Tyr Leu	Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu Ala			
	455	460			465
Ser Leu Phe Gly	Leu Tyr Phe His Gln	His Leu Ala Gly Ser			
	470	475			

<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
 cgttngcaag cgtcaatggc ggtcctcgga gtacagctgg tggtagccct 50
 gctcactgcc accctcatgc acaggctggc gccacactgc tcttctgcgc 100
 gctggctgct ctgtaacggc agtttgttcc gatacaagca cccgntttga 150
 ggaggagctt cgggccctgg cggggaagcc gagggccaga ggcaggaaag 200
 agcggtgggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250
 gatgccccgt tccagctgga gacctgcccc ctcacgacgg tggatgcct 300
 ggtcctgcgc tcttctctgg agtaccagtg gtttgtggac tttgctgtgt 350

actcgggctg cgtgtacctc ttcacagagg cctactacta catgctggga 400
ccagccaaagg agactaacat tgctgtgttc tgggtgcctgc tcacagtgc 450
ctctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttctg 550
ctgtgggcca tgctgggtgca agcg 574

<210> 218
<211> 2571
<212> DNA
<213> Homo sapiens

<400> 218
ggttcctaca tcctctcatc tgagaatcag agagcataat cttcttaagg 50
gccccgtgatt tattaacgtg gcttaatctg aaggtttctca gtcaaattct 100
ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
ggctggtttg ggccttgta gctgacagaa ggtggccagg gagaatgcag 200
cacactgtct ggagaatgaa ggcgcttctg ttgctggctt tgcttggct 250
cagtcctgct aactacattg acaatgtggg caacctgcac ttctgtatt 300
cagaactctg taaagggtgcc tccactacg gctgaccaa agataggaag 350
aggcgctcac aagatggctg tcacagcggc tgtgcgagcc tcacagccac 400
ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450
acgagcctgg ctagagacaac cctgcctacg tgtcctcggc agaggacggg 500
cagccagcaa tcagcccagt ggactctggc cggagcaacc gaactagggc 550
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagtgcc 650
aaccatgccg accagggcag ggaaaattct gaaaacacca ctgccctga 700
agtctttcca aggttgtacc acctgattcc agatggtgaa attaccagca 750
tcaagatcaa tcgagtagat ccacgtgaaa gcctctctat taggctggtg 800
ggaggtagcg aaacccact ggtccatato attatccaac acatttatog 850
tgatggggtg atcgccagag acggccggct actgccagga gacatcattc 900
taaagggtcaa cgggatggac atcagcaatg tccttcacaa ctacgtctg 950
cgtctcctgc ggcagccctg ccagggtgctg ttggtgactg tgatgcgtga 1000
acagaagttc cgcagcagga acaatggaca ggcccgat gcctacagac 1050
ccgagatga cagctttcat gtgattctca aaaaagtag ccccgaggag 1100
cagcttgtaa taaaactggt gcgcaagggt gatgagcctg gggttttcat 1150
cttcaatgct ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200

agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250
 ccagaaagtg cggtcatct gattoaggcc agtgaaagac gtgttcacot 1300
 cgtcgtgtcc cgccaggttc ggcagcgag ccctgacatc tttcaggaa 1350
 ccggtctggaa cagcaatggc agctggtccc cagggccagg ggagaggagc 1400
 aacctccca agccctcca tctacaatt acttgatcg agaaggtggt 1450
 aaatatccaa aaagacccc gtgaatctct cgcatgacc gtcgagggg 1500
 gagcatcaca tagagaatg gatttgcta tctatgtcat cagtgttag 1550
 ccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600
 gttgaatgtg gatggggtcg aactgacaga ggtcagccgg agtgaggcag 1650
 tggcattatt gaaaagaaca tcctcctcga tagtactcaa agcttttgaa 1700
 gtcaaagagt atgagcccca ggaagactgc agcagcccag cagccctgga 1750
 ctccaaccac aacatggccc caccagtga ctggtcccca tctcgggtca 1800
 tgtggtgga attaccacgg tgcctgtata actgtaaaga tattgtatta 1850
 cgaagaaaca cagctggaag tctgggcttc tgcatgtag gaggttatga 1900
 agaatacaat ggaacaaac cttttttcat caaatccatt gttgaaggaa 1950
 caccagcata caatgatgga agaattagat gtggtgatat tcttcttct 2000
 gtcaatggtg gaagtacatc agaatgata catgcttctc tggcaagact 2050
 gctgaaagaa cttaaaggaa gaattactct aactattgtt tcttggcctg 2100
 gcacttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150
 aaataggcta agaagttgaa acactatatt tatcttgta gttttttat 2200
 ttaaagaag aatacattgt aaaaatgtca gaaaagtat gatcatctaa 2250
 tgaaagccag ttacacotca gaaaatatga ttccaaaaaa attaaaaacta 2300
 ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350
 atattttttc tattcaataa aaagccctaa aacaactaaa atgattgatt 2400
 tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450
 ctgaagtctg ccaagggtag attatggcca tttttaattt acagctaaaa 2500
 ttttttttaa aatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550
 aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

1	5	10	15
Asn Tyr Ile Asp	Asn Val Gly Asn Leu His	Phe Leu Tyr Ser Glu	
	20	25	30
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg Lys	
	35	40	45
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu Thr	
	50	55	60
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Thr Ile Ser	
	65	70	75
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val Ser	
	80	85	90
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser Gly	
	95	100	105
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr Ile	
	110	115	120
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val Leu	
	125	130	135
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp Gln	
	140	145	150
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe Pro	
	155	160	165
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile Lys	
	170	175	180
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu Val	
	185	190	195
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His Ile	
	200	205	210
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro Gly	
	215	220	225
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val Pro	
	230	235	240
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val Leu	
	245	250	255
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn Asn	
	260	265	270
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe His	
	275	280	285
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile Lys	
	290	295	300
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn Val	
	305	310	315
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu Asn	

	320	325	330
Asp Arg Val Leu	Ala Ile Asn Gly His 335	Asp Leu Arg Tyr Gly Ser 340	345
Pro Glu Ser Ala	Ala His Leu Ile Gln 350	Ala Ser Glu Arg Arg Val 355	360
His Leu Val Val	Ser Arg Gln Val Arg 365	Gln Arg Ser Pro Asp Ile 370	375
Phe Gln Glu Ala	Gly Trp Asn Ser Asn 380	Gly Ser Trp Ser Pro Gly 385	390
Pro Gly Glu Arg	Ser Asn Thr Pro Lys 395	Pro Leu His Pro Thr Ile 400	405
Thr Cys His Glu	Lys Val Val Asn Ile 410	Gln Lys Asp Pro Gly Glu 415	420
Ser Leu Gly Met	Thr Val Ala Gly Gly 425	Ala Ser His Arg Glu Trp 430	435
Asp Leu Pro Ile	Tyr Val Ile Ser Val 440	Glu Pro Gly Gly Val Ile 445	450
Ser Arg Asp Gly	Arg Ile Lys Thr Gly 455	Asp Ile Leu Leu Asn Val 460	465
Asp Gly Val Glu	Leu Thr Glu Val Ser 470	Arg Ser Glu Ala Val Ala 475	480
Leu Leu Lys Arg	Thr Ser Ser Ser Ile 485	Val Leu Lys Ala Leu Glu 490	495
Val Lys Glu Tyr	Glu Pro Gln Glu Asp 500	Cys Ser Ser Pro Ala Ala 505	510
Leu Asp Ser Asn	His Asn Met Ala Pro 515	Pro Ser Asp Trp Ser Ser 520	525
Ser Trp Val Met	Trp Leu Glu Leu Pro 530	Arg Cys Leu Tyr Asn Cys 535	540
Lys Asp Ile Val	Leu Arg Arg Asn Thr 545	Ala Gly Ser Leu Gly Phe 550	555
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr 560	Asn Gly Asn Lys Pro Phe 565	570
Phe Ile Lys Ser	Ile Val Glu Gly Thr 575	Pro Ala Tyr Asn Asp Gly 580	585
Arg Ile Arg Cys	Gly Asp Ile Leu Leu 590	Ala Val Asn Gly Arg Ser 595	600
Thr Ser Gly Met	Ile His Ala Cys Leu 605	Ala Arg Leu Leu Lys Glu 610	615
Leu Lys Gly Arg	Ile Thr Leu Thr Ile 620	Val Ser Trp Pro Gly Thr 625	630
Phe Leu			

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacag 150
 gtttttaaca toatcagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccagggtgc tctccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaacacag 400
 ctctggacaa catgttctcc aacaaatata cctgggtcaa gtacaacct 450
 ctggagtctc tgatcaaaga cgtggattgg ttctgcttg ggtcaccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgtcgggtgt ggaggctgtg caaaggctgg gctcctgggc 600
 atcttgggaa ttccaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaatacat ccttggttta cactcaaaag 700
 tcaaattaaa ttctttccca atgccccaac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln
 95 100
 Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr
 110 115 120
 Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu
 125 130 135
 Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys
 140 145 150
 Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys
 155 160 165
 Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala
 170 175 180
 Asp Ile His Val

<210> 222
 <211> 992
 <212> DNA
 <213> Homo sapiens

<400> 222
 ggcacgagcc aggaactagg aggttctcac tgcccagaca gaggcctac 50
 acccaccgag gcattggggt ccttgggtg ttctgtcttg cgtgtctggc 100
 tgccagcagc ttctccaagg caccggagga agaaattacc cctgtgtctt 150
 ccattgccta caaagtcttg gaagttttcc ccaaaggccg ctgggtgctc 200
 ataacctgct gtgcacccca gccaccaccg cccatcacct attcctctg 250
 tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagcagc 300
 cggcctcctt caacctcaac gtcacactca agtccagtcc agacctgtct 350
 acctacttct gccggggtgc ctccacctca ggtgcccatg tggacagtgc 400
 caggctacag atgcactggg agctgtgtgc caagccagtg tctgagctgc 450
 gggccaaact cactctgcag gacagagggg caggcccgag ggtggagatg 500
 atctgccagg cgtcctcggg cagccacact atcaccaaca gectgatcgg 550
 gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600
 ccaacttctc ctctctgccg agccagacat cggaactggt ctggtgccac 650
 gctgcaaaca acgccaatgt ccagcacagc gccctcacag tggtgccccc 700
 aggtggtgac cagaagatg aggaactggc ggggtcccct gagagcccca 750
 tcttgcctt gccgctctac aggaagaccc gccgtctgag tgaagaggag 800
 tttggggggt tcaggatagg gaattggggg gtcagaggac gcaaagcagc 850
 agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttggga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met	Gly	Leu	Pro	Gly	Leu	Phe	Cys	Leu	Ala	Val	Leu	Ala	Ala	Ser
1				5					10					15
Ser	Phe	Ser	Lys	Ala	Arg	Glu	Glu	Glu	Ile	Thr	Pro	Val	Val	Ser
			20						25					30
Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val
			35						40					45
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Ile	Thr	Tyr	Pro
			50						55					60
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val
			65						70					75
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys
			80						85					90
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr
			95						100					105
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu
			110						115					120
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu
			125						130					135
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala
			140						145					150
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp
			155						160					165
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala
			170						175					180
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys
			185						190					195
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val
			200						205					210
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro
			215						220					225
Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg
			230						235					240
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly
			245						250					255
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met					
			260						265					

<210> 224
 <211> 1297
 <212> DNA
 <213> Homo sapiens

<400> 224
 ggtccttaat ggcagcagcc gccgctacca agatccttct gtgcctcccg 50
 cttctgctcc tgctgtccgg ctggtcccg gctgggcgag ccgaccctca 100
 ctctctttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150
 ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttactat 200
 gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
 aaatgtcaca acggccctga aagcacagaa ccagtagctg agagaggtgg 300
 tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
 cccaaggaac ccctcacctc gcaggcaagg atgtcttgtg agcagaaaag 400
 tgaaggacac agcagtgatg cttggcagtt cagtttcgat ggcagatct 450
 tcctcctctt tgactcagag aagagaatgt ggacaacggt tcctctgga 500
 gccagaaaga tgaaagaaaa gtgggagaat gacaagggtg tggccatgtc 550
 cttccattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600
 tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
 atgtcctcag gcacaaccca actcagggcc acagccacca ccctcatcct 700
 ttgtctgctc ctcacatcc tcccctgctt catcctcctt ggcactctgag 750
 gagagtccct tagagtgaca ggttaaagct gatacaaaaa ggctcctgtg 800
 agcacggtct tgatcaaact cgccttctg tctggccagc tgcccacgac 850
 ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
 ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccagc 950
 agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
 ttctgcact taaagtctg gctgactaaa caagatatat cattttcttt 1050
 cttctctttt tgttttgaaa atcaagtact tctttgaatg atgatctctt 1100
 tcttgcaaat gatattgtca gtaaaataat cacttagac ttcagacctc 1150
 tggggattct ttccgtgtcc tgaaagagaa tttttaaatt atttaataag 1200
 aaaaaattta tattaatgat tgtttccttt agtaatttat tgttctgtac 1250
 tgatatattaa ataaagagt ctatttccca aaaaaaaaaa aaaaaa 1297

<210> 225
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 225

```

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
 1           5           10          15
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
 20          25          30
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
 35          40          45
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
 50          55          60
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
 65          70          75
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
 80          85          90
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
 95          100         105
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
 110         115         120
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
 125         130         135
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
 140         145         150
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
 155         160         165
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
 170         175         180
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
 185         190         195
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
 200         205         210
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
 215         220         225
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
 230         235         240
Phe Ile Leu Pro Gly Ile
 245

```

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

```

gggaaagcca ttctgaaaac coactatatac aaactatata ttttcatttc 50
tgctgctagc tgccttgggc ctcacaattt tcattctgtt ttctgacttt 100
caagtatat accgtggaat ggagttgato ccaaccataa catcgtggag 150

```

ggttttaatt ttggtggtag ccctcaccca attctggtgt ggctttcttt 200
 gcagaggatt ccacettcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttggtat tctactctaa aagccaatat aggacttggc aaaagaagt 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350
 atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
 attccaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450
 ctgggccagg ctgtaatcag aattgtctgc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
 ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttcctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 227
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu
 1 5 10 15
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
 50 55 60
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
 65 70 75
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
 80 85 90
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Glu
 95 100 105
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu
 110 115

<210> 228
 <211> 2185
 <212> DNA
 <213> Homo sapiens

<400> 228
 gttctccttt ccgagccaaa atcccaggcg atgggtgaatt atgaacgtgc 50
 cacaccatga agctcttggt gcaggttaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccggtcg tctacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gctcagccg ggccccagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgccgggg 250
 cctctccgag gtcccgagg gtattccctc gaacaccocg tacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggcagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcatc cctagcgggg cctttgaata cctgtccaag 500
 ctgccccgag tctggtctcg caacaacccc atcgaaagca tcccctctta 550
 cgccctcaac cgggtgccct cctcatgctg cctggacttg ggggagctca 600
 agaagctgga gtatatctct gagggagctt ttgaggggct gttcaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 cccccgtgtg gggctggagg agctggagat gtcagggaac cacttccctg 750
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcatgaact cacaggtoag cctgattgag cggaatgctt ttgacgggct 850
 ggcttcaact gtggaactca acttggccca caataacctc tcttctttgc 900
 cccatgaact ctttaccocg ctgaggtagc tgggtggagt gcactctac 950
 cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctgggtggct 1000
 tcgagagtat ataccaccca attccacctg ctgtggccgc tgtcatctc 1050
 ccatgcacat gcgaggccgc tacctcgttg aggtggacca ggccctcttc 1100
 cagtgtctcg cccctctcat catggacgca cctcgagacc tcaacatttc 1150
 tgagggtcgg atggcagaac ttaagtgtcg gactccccct atgtctctcg 1200
 tgaagtgtt gctgcccaat gggacagtgc tcagccaacgc ctcccgccac 1250
 ccaaggatct ctgtctcaa cgacggcacc ttgaactttt ccaagtgct 1300
 gctttcagac actgggggtg acacatgcat ggtgaccaat gttgcaggca 1350
 actccaacgc ctgggcctac ctcaatgtga gcacggctga gcttaacacc 1400
 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450
 gcctgaggac acaacgcgaa agtacaagcc tgttcctacc acgtccactg 1500
 gttaccagcc ggcataatac acctotacca cggtgtctat tcagactacc 1550
 cgtgtgcccc agcagggtggc agtaccocgc acagacacca ctgacaagat 1600
 gcagaccagc ctggatgaag tcattgaagac caccaagatc atcattggct 1650
 gctttgtggc agtgactctg ctagtgcgc ccatgttgat tgtcttctat 1700

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750
 tgttgagata atccaggtgg acgaagacat cccagcagca acatccgcag 1800
 cagcaacagc agctccgtcc ggtgtatcag gtgagggggc agtagtgctg 1850
 cccacaattc atgaccatata taactacaac acctacaaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000
 cagggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttctgtgata tgcttatata ttaagtctat gggctgggta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229
 <211> 653
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn
 1 5 10 15
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
 20 25 30
 Leu Cys Ala Ala Ile Ala Ala Ala Ser Ala Gly Pro Gln Asn
 35 40 45
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
 50 55 60
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
 65 70 75
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
 80 85 90
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
 95 100 105
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
 110 115 120
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
 125 130 135
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
 140 145 150
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
 155 160 165
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
 170 175 180
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

	185		190		195
Phe Asn Leu Lys Tyr	200	Leu Asn Leu Gly	205	Met Cys Asn Ile Lys	210
Met Pro Asn Leu Thr	215	Pro Leu Val Gly	220	Leu Glu Glu Leu Glu	225
Ser Gly Asn His Phe	230	Pro Glu Ile Arg	235	Pro Gly Ser Phe His	240
Leu Ser Ser Leu Lys	245	Lys Leu Trp Val	250	Met Asn Ser Gln Val	255
Leu Ile Glu Arg Asn	260	Ala Phe Asp Gly	265	Leu Ala Ser Leu Val	270
Leu Asn Leu Ala His	275	Asn Asn Leu Ser	280	Ser Leu Pro His Asp	285
Phe Thr Pro Leu Arg	290	Tyr Leu Val Glu	295	Leu His Leu His His	300
Pro Trp Asn Cys Asp	305	Cys Asp Ile Leu	310	Trp Leu Ala Trp Trp	315
Arg Glu Tyr Ile Pro	320	Thr Asn Ser Thr	325	Cys Cys Gly Arg Cys	330
Ala Pro Met His Met	335	Arg Gly Arg Tyr	340	Leu Val Glu Val Asp	345
Ala Ser Phe Gln Cys	350	Ser Ala Pro Phe	355	Ile Met Asp Ala Pro	360
Asp Leu Asn Ile Ser	365	Glu Gly Arg Met	370	Ala Glu Leu Lys Cys	375
Thr Pro Pro Met Ser	380	Ser Val Lys Trp	385	Leu Leu Pro Asn Gly	390
Val Leu Ser His Ala	395	Ser Arg His Pro	400	Arg Ile Ser Val Leu	405
Asp Gly Thr Leu Asn	410	Phe Ser His Val	415	Leu Leu Ser Asp Thr	420
Val Tyr Thr Cys Met	425	Val Thr Asn Val	430	Ala Gly Asn Ser Asn	435
Ser Ala Tyr Leu Asn	440	Val Ser Thr Ala	445	Glu Leu Asn Thr Ser	450
Tyr Ser Phe Phe Thr	455	Thr Val Thr Val	460	Glu Thr Thr Glu Ile	465
Pro Glu Asp Thr Thr	470	Arg Lys Tyr Lys	475	Pro Val Pro Thr Thr	480
Thr Gly Tyr Gln Pro	485	Ala Tyr Thr Thr	490	Ser Thr Thr Val Leu	495
Gln Thr Thr Arg Val		Pro Lys Gln Val		Ala Val Pro Ala Thr	Asp

	500		505		510
Thr Thr Asp Lys Met Gln Thr Ser Leu Asp Glu Val Met Lys Thr	515		520		525
Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Val Thr Leu Leu Ala	530		535		540
Ala Ala Met Leu Ile Val Phe Tyr Lys Leu Arg Lys Arg His Gln	545		550		555
Gln Arg Ser Thr Val Thr Ala Ala Arg Thr Val Glu Ile Ile Gln	560		565		570
Val Asp Glu Asp Ile Pro Ala Ala Thr Ser Ala Ala Ala Thr Ala	575		580		585
Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val Val Leu Pro Thr	590		595		600
Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro Ala His Gly	605		610		615
Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His Pro Thr	620		625		630
Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr Lys	635		640		645
Asp Lys Val Gln Glu Thr Gln Ile	650				

```

<210> 230
<211> 2846
<212> DNA
<213> Homo sapiens

<400> 230
cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50
tggggctcac tttttctcag ctcctttctca tctcgtcctt gccaaagagag 100
tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
tcgggagtg c tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200
gggaagtctg ggggtatacc atcccttgct gcaggaatga ggagaatgag 250
tgtgactcct gcctgatcca ccaggttgt accatctttg aaaactgcaa 300
gagctgcgca aatggctcat gggggggtag ottggatgac ttctatgtga 350
aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400
atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450
aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500
ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550
atgtgcagat atgactatgt tgaggttcgt gatggagaca accgcgatgg 600
ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

```

gcataaggatc ctccactccac gtccctcttcc actccgatgg ctccaagaat 700
 tttagacggtt tccatgcccat ttatgaggag atcacagcat gctcctcatc 750
 cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttggcaggc tatactgggc agcgtgtgta aaatctcctt 850
 gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900
 aataacaggg ggccctgggc ttatcaacgg acgccatgct aaaattggca 950
 ccgtggtgtc ttctctttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcaggggaaa agcccatctg 1050
 cataaaagcc tgccgagaac caaagatttc agacctggtg agaaggagag 1100
 ttcttcgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150
 tcagcgccct tcagcaagca gaaactgcag agtgccccta ccaagaagcc 1200
 agcccttccc tttagagatc tgcccattgg ataccaacat ctgcataccc 1250
 agtccagta tgagtgcac tcacccttct accgcccctt gggcagcagc 1300
 aggaggacat gtctgaggac tgggaagtgg agtgggcggg caccatcctg 1350
 catccctatc tgccggaaaa ttgagaacat cactgctcca aagacccaag 1400
 ggttgccctg gccgtggcag gcagccatct acaggaggac cagcgggggtg 1450
 catgacggca gcctacaca gggagcgtgg ttctagtct gcagcggtcg 1500
 cctggtgaat gagcgcactg tgggtgtggc tgcccactgt gttactgacc 1550
 tggggaaggt caccatgac aagacagcag acctgaaagt tgttttgggg 1600
 aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650
 gatttctgct atcattctgc atcccaacta tgaccccatc ctgcttgatg 1700
 ctgacatgc catcctgaag ctccatagca aggcccgat cagcaccgca 1750
 gtccagccca tctgctcgc tgccagtcgg gatctcagca ctcccttcca 1800
 ggagtccac atcactgtgg ctggctggaa tgtcctggca gacgtgagga 1850
 gccctggcct caagaacgac aactgcgct ctgggggtgt cagtgtggtg 1900
 gactcgtgc tgtgtgagga gcagcatgag gaccatggca tcccatgag 1950
 tgtcactgat aacatgttct gtgccagctg ggaaccact gcccttctg 2000
 atatctgcac tgcagagaca ggaggcatcg cggctgtgto ctcccccggg 2050
 cgagcatctc ctgagccaac ctggcatctg atgggactgg tcagctggag 2100
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaagggtg 2150
 tgccctttta agactggatt gaaagaaata tgaaatgaac catgctcatg 2200
 cactccttga gaagtgttct tgtatatccg tctgtacgtg tgtcattgag 2250

tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300
cagggcttct gacttcaggg acaaaactca gtgaagggtg agtagacctc 2350
cattgctggt aggctgatgc cgcgtccact actaggacag ccaattggaa 2400
gatgccaggg ctgtcaagaa gtaagtttct tcaaagaaga ccatatacaa 2450
aacctctcca ctccactgac ctggtggtct tccccaaactt tcagttatac 2500
gaatgccatc agcttgacca gggaagatct gggcttcctg aggccctttt 2550
tgaggctctc aagttctaga gagctgcttg tgggacagcc cagggcagca 2600
gagctgggat gtggtgcatg ctttgtgta catggccaca gtacagtctg 2650
gtccttttcc ttcccatct cttgtacaca ttttaataaa ataagggttg 2700
gtctctgaac tacaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231

<211> 720

<212> PRT

<213> Homo sapiens

<400> 231

Met	Glu	Leu	Gly	Cys	Trp	Thr	Gln	Leu	Gly	Leu	Thr	Phe	Leu	Gln
1				5					10					15
Leu	Leu	Leu	Ile	Ser	Ser	Leu	Pro	Arg	Glu	Tyr	Thr	Val	Ile	Asn
				20					25					30
Glu	Ala	Cys	Pro	Gly	Ala	Glu	Trp	Asn	Ile	Met	Cys	Arg	Glu	Cys
				35					40					45
Cys	Glu	Tyr	Asp	Gln	Ile	Glu	Cys	Val	Cys	Pro	Gly	Lys	Arg	Glu
				50					55					60
Val	Val	Gly	Tyr	Thr	Ile	Pro	Cys	Cys	Arg	Asn	Glu	Glu	Asn	Glu
				65					70					75
Cys	Asp	Ser	Cys	Leu	Ile	His	Pro	Gly	Cys	Thr	Ile	Phe	Glu	Asn
				80					85					90
Cys	Lys	Ser	Cys	Arg	Asn	Gly	Ser	Trp	Gly	Gly	Thr	Leu	Asp	Asp
				95					100					105
Phe	Tyr	Val	Lys	Gly	Phe	Tyr	Cys	Ala	Glu	Cys	Arg	Ala	Gly	Trp
				110					115					120
Tyr	Gly	Gly	Asp	Cys	Met	Arg	Cys	Gly	Gln	Val	Leu	Arg	Ala	Pro
				125					130					135
Lys	Gly	Gln	Ile	Leu	Leu	Glu	Ser	Tyr	Pro	Leu	Asn	Ala	His	Cys
				140					145					150
Glu	Trp	Thr	Ile	His	Ala	Lys	Pro	Gly	Phe	Val	Ile	Gln	Leu	Arg
				155					160					165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn
				485					490					495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly
				500					505					510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly
				515					520					525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser
				530					535					540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile
				545					550					555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala
				560					565					570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg
				575					580					585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly
				590					595					600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp
				605					610					615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys
				620					625					630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp
				635					640					645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile
				650					655					660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly
				665					670					675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser
				680					685					690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe
				695					700					705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys
				710					715					720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcaactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gctcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatat 100
attcaccgtaa taacaaacat gggcttcaac ctgactttcc acctttccta 150
caaatccoga ttactgttgc tgttgacttt gtgcctgaca gtggttgagg 200
gggcccaccag taactacttc gtgggtgccca ttcaagagat tcctaaagca 250
aaggagttca tggctaattt ccataagacc ctcatcttgg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tcttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tgggaagagg acaggcagaa aatcccaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaagcttt acagagggtc gccatcctcg 500
ttccccaccg gaacagagag aaacacotga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg tacccgagaa tgactttaac cttacaagt gtgaggagca 750
tcccaagcat ctggtggttg gcaggaacag cactgggtac aggttacgtt 800
acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850
aagggtaatg gattctctaa caactactgg ggaatggggag gcgaagacga 900
tgacctcaga ctcagggttg agtcccaaag aatgaaaatt tcccggtccc 950
tgccctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000

aatgagggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100
 aacacaatcc tttatatatc aacatcacag tggatttctg gtttggtgca 1150
 tgaccttgga tcttttgggt atgtttggaa gaactgatto tttgtttgca 1200
 ataattttgg cctagagact tcaaatagta gcacacatta agaacctgtt 1250
 acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300
 ctctcgttga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350
 tcattttgat catgagggtt aaatattgta atatggatc ttgaaggact 1400
 ttataaaaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450
 tgggtgaagg agattttatt aaatttgaag taatatatta tgggataaaa 1500
 ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550
 cgtccaaggt agaaaggtag gaagatacaa tactgttatt catttatcct 1600
 gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650
 gaggggagaa aaggcgacga atcaggacac agtgaacttg ggaatgaaga 1700
 ggtagcagga ggtgagtg tcggctgcaa aggcagcagt agctgagctg 1750
 gttgcagtg ctgatagcct tcaggggagg acctgccag gtatgccttc 1800
 cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
 tgtaaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaa 1950
 gtgaaaaagc aaaa 1964

<210> 236
 <211> 344
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-27
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 4-7, 220-223, 335-338
 <223> N-glycosylation sites

<220>
 <221> Xylose isomerase proteins
 <222> 191-201
 <223> Xylose isomerase proteins

<400> 236
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
 1 5 10 15

Leu Leu Leu Leu Thr Leu Cys Leu Thr Val Val Gly Trp Ala Thr
 20 25 30
 Ser Asn Tyr Phe Val Gly Ala Ile Gln Glu Ile Pro Lys Ala Lys
 35 40 45
 Glu Phe Met Ala Asn Phe His Lys Thr Leu Ile Leu Gly Lys Gly
 50 55 60
 Lys Thr Leu Thr Asn Glu Ala Ser Thr Lys Lys Val Glu Leu Asp
 65 70 75
 Asn Cys Pro Ser Val Ser Pro Tyr Leu Arg Gly Gln Ser Lys Leu
 80 85 90
 Ile Phe Lys Pro Asp Leu Thr Leu Glu Glu Val Gln Ala Glu Asn
 95 100 105
 Pro Lys Val Ser Arg Gly Arg Tyr Arg Pro Gln Glu Cys Lys Ala
 110 115 120
 Leu Gln Arg Val Ala Ile Leu Val Pro His Arg Asn Arg Glu Lys
 125 130 135
 His Leu Met Tyr Leu Leu Glu His Leu His Pro Phe Leu Gln Arg
 140 145 150
 Gln Gln Leu Asp Tyr Gly Ile Tyr Val Ile His Gln Ala Glu Gly
 155 160 165
 Lys Lys Phe Asn Arg Ala Lys Leu Leu Asn Val Gly Tyr Leu Glu
 170 175 180
 Ala Leu Lys Glu Glu Asn Trp Asp Cys Phe Ile Phe His Asp Val
 185 190 195
 Asp Leu Val Pro Glu Asn Asp Phe Asn Leu Tyr Lys Cys Glu Glu
 200 205 210
 His Pro Lys His Leu Val Val Gly Arg Asn Ser Thr Gly Tyr Arg
 215 220 225
 Leu Arg Tyr Ser Gly Tyr Phe Gly Gly Val Thr Ala Leu Ser Arg
 230 235 240
 Glu Gln Phe Phe Lys Val Asn Gly Phe Ser Asn Asn Tyr Trp Gly
 245 250 255
 Trp Gly Gly Glu Asp Asp Asp Leu Arg Leu Arg Val Glu Leu Gln
 260 265 270
 Arg Met Lys Ile Ser Arg Pro Leu Pro Glu Val Gly Lys Tyr Thr
 275 280 285
 Met Val Phe His Thr Arg Asp Lys Gly Asn Glu Val Asn Ala Glu
 290 295 300
 Arg Met Lys Leu Leu His Gln Val Ser Arg Val Trp Arg Thr Asp
 305 310 315
 Gly Leu Ser Ser Cys Ser Tyr Lys Leu Val Ser Val Glu His Asn
 320 325 330

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacg cgttctcgct tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggctcgcc atcctcggtc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
cgtggggccgg ggtcgcgcag cgggctgtgg gcgcgcccg aggagcgacc 50
gcgcagttc tcgagctcca gctgcattcc etccgcgtcc gccccacgt 100
tctcccgctc cgggccccgc aatggcccag gcagtggtgt cgcgcctcgg 150
ccgcatactc tggcttgctt gctcctgccc ctgggccccg gcaggggtgg 200
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacc 250
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggcccctg cccgctgacg cccacctcta ccgcttcac tgcatccaca 350
ccccgctggt gcttactggc aagatggaga aggtctctac ctccaccatc 400
cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500
tccccatcac agagttcctc gtgggggacc ttgttgtcac ccagaacact 550

tccctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
 cttctctctc caccgaccga gcaacttcct caagaccgcc ttgtttctct 650
 acagctggga cttcggggac gggaccaga tggtgactga agactccgtg 700
 gtctattata actattccat catcgggacc ttcacogtga agctcaaagt 750
 ggtggcggag tgggaagag tgagaccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggaacttctcc gcctcgctga agctgcagga aacctctoga 850
 ggcatccaag tgttggggcc caccctaatt cagacottcc aaaagatgac 900
 cgtgaccttg aacttctctg ggagccctcc tctgactgtg tgcctggctc 950
 tcaagcctga gtgcctcccg ctggaggaag gggagtgcga cctgtgtccc 1000
 gtggccagca cagcgtacaa cctgaccac accttcaggg accctgggga 1050
 ctactgcttc agcatccggg ccgagaatat catcagcaag acacatcagt 1100
 accacaagat ccaggtgtgg ccctccagaa tccagccggc tgcctttgct 1150
 ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
 gaccctcggg aatgccactc agcaaaagga catggtggag aacccggagc 1250
 caccctctgg ggtcaggtgc tgcgtccaga tgtgctgtgg gcctttcttg 1300
 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350
 gctcccgccc ctctataagt ctgtcaaaac ttacaccgtg tgagcactcc 1400
 ccctccccc cccatctcag tgtaactga ctgctgactt ggagtcca 1450
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacagcc 1550
 cctccctctc tgtcaccctc gacccagacc attcacccat ctgtacagtc 1600
 cagccactga cataagcccc actcgggtac caccoccttg accocctacc 1650
 tttgaagagg cttcgtgcag gactttgatg cttgggggtg tccgtgttga 1700
 ctccataggg ggccctggctg ccactgccc attcctctca tattggcaca 1750
 tctgtgtccc attgggggtt ctgagtttcc tcccagac agccctacct 1800
 gtgccagaga gctagaaaga aggtcataaa ggggtaaaaa tccataacta 1850
 aagggtgtac acatagatgg gcacactcac agagagaagt gtgcattgac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtccgtt 2000
 gctgggatgc accctgcact agagctgaaa ggaattttga cctccaagca 2050
 gccctgacag gttctggggc cgggccctcc ctttgtgtt tgcctctgca 2100
 gttcttgcgc cctttataag gccatccatg tccctgctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
 atatcacctt attttatcga aacccatctg tgaactttc actgaggaaa 2250
 aggccttgca gcggtagaag aggttgagtc aaggccgggc gcggtggctc 2300
 acgcctgtaa tcccagcact ttgggaggcc gagcggggtg gatcacgaga 2350
 tcaggagatc gagaccacc tggttaacac ggtgaaaccc cgtctctact 2400
 aaaaaaatac aaaaagttag ccgggcgtgg tgggtgggtgc ctgtagtccc 2450
 agctactcgg gaggtgagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gcttgcatg agcccagatg gcgccactgc actccagcct gagtgcaga 2550
 gcgagactct gtctcca 2567

<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 241
 Met Ala Gln Ala Val Trp Ser Arg Leu Gly Arg Ile Leu Trp Leu
 1 5 10 15
 Ala Cys Leu Leu Pro Trp Ala Pro Ala Gly Val Ala Ala Gly Leu
 20 25 30
 Tyr Glu Leu Asn Leu Thr Thr Asp Ser Pro Ala Thr Thr Gly Ala
 35 40 45
 Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser
 50 55 60
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile
 65 70 75
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser
 80 85 90
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val
 95 100 105
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val
 110 115 120
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly
 125 130 135
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser
 140 145 150
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp
 155 160 165
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp
 170 175 180
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr
 185 190

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
	200								205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
	215								220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
	230								235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
	245								250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
	260								265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
	275								280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
	290								295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
	305								310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
	320								325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
	335								340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
	350								355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
	365								370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
	380								385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
	395								400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
	410								415					420

Tyr Thr Val

<210> 242
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 242
 catttcotta cctggacc agctcc 26

 <210> 243
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgaccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gtcctaagacc cagcagtgagg acagccagac agacggcagc atggcactga 50
gtctccagat ctggggccgct tgcctctctc tctctctctc cctgcgcagc 100
ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccaactcc ccatctgcac tttctgctgc 250
ggctgtgtgc atogatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg ccccggtccc ctcccttctc tatttattcc tgcctgcccc 350
gaacataggt ctggaataa aatggctggt tcttttggtt tccaaaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr

80

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctggatct tccaccatgt tcctgttgct gccttttgat 100
agcctgattg tcaacctctt gggcatctcc ctgactgtcc tcttcacctt 150
ccttctcggt ttcacatag tgccagccat ttttgaggat tcctttggta 200
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcgaggagc caaggagaag aaccaccagc ttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggctctgga caacactcca 400
gagttcgagc tctctgacat tttctacttt tgccggaaa gaaaggagac 450
cattatggat gatgagggtg caaagagatt ctacagagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttccagta catcagcctt 550
cggtcacagg tcctgtgggg gttaggagtg ctgattcggt actgctttct 600
gctgcgcgtc aggatagcac tggctttcac agggattagc cttctggtgg 650
tgggcacaac tgtggtggga tacttgcoaa atgggaggtt taaggaattc 700
atgagtaaac atgttcaact aatgtgttac cggatctgct tgcgagcgct 750
gacagccatc atcacctacc atgacaggga aaacagacca agaaatggtg 800
gcactctgtg ggccaatcat acctaccga tcgatgtgat catcttggcc 850
agcgtaggct attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatcctc atcttccagc aaggaacctg 1050
catcaataat acatcgggtg tgatgttcaa aaaggaagt tttgaaattg 1100
gagccacagt ttacctctgt gctatcaagt atgacctca atttggcgat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctcgcaat 1200
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250
ctagagagggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgccca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagaggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
 acagcaagat gatcgtgggg aaccacaagg acaggagccg ctcctgagcc 1450
 tgctccagc tggctggggc caccgtgcgg ggtgccaacg ggctcagagc 1500
 tggagtgcgc gccgcgccc ccaactgctgt gtcccttcca gactccaggg 1550
 ctccccgggc tgctctggat ccaggaactc cggtcttcgc cgagccgcag 1600
 cgggatccct gtgcaccccg cgcagcctac ccttggtggt ctaaacggat 1650
 gctgctgggt gttgcgaccc aggacgagat gccttgtttc tttacaata 1700
 agtcgttga ggaatgccat taaagtgaac tccccacctt tgcacgctgt 1750
 gcgggctgag tggttggga gatgtggcca tggctctgtg ctatagatgg 1800
 cggtaacaaga gtctgttatg caagcccggtg tgccagggat gtgctggggg 1850
 cggccaccog ctctccagga aaggcacagc tgaggcactg tggctggcctt 1900
 cggcctcaac atgcacccca gccttgagc tctgcagaca tgataggaag 1950
 gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
 tgctgtgct gatggggtta cttaaaggag gggaagaggc caggtgggcc 2050
 gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100
 aactcccoat gtgatgcgcg ctttgttgaa tgtgtgtctc ggtttcccca 2150
 tctgtaatat gagtggggg gaatggtggt gattcctacc tcacagggct 2200
 gttgtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250
 tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300
 gctgctgcac tgggcttttg attgttctt gtgagtaaat aaaactggct 2350
 ggtgaatga 2359

<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
 Met Phe Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
 1 5 10 15
 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
 20 25 30
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

Tyr Thr Asn Gly	Ile Ile Ala Lys Asp	Pro Thr Ser Leu Glu	Glu
80	85		90
Glu Ile Lys Glu	Ile Arg Arg Ser Gly	Ser Ser Lys Ala Leu	Asp
95	100		105
Asn Thr Pro Glu	Phe Glu Leu Ser Asp	Ile Phe Tyr Phe Cys	Arg
110	115		120
Lys Gly Met Glu	Thr Ile Met Asp Asp	Glu Val Thr Lys Arg	Phe
125	130		135
Ser Ala Glu Glu	Leu Glu Ser Trp Asn	Leu Leu Ser Arg Thr	Asn
140	145		150
Tyr Asn Phe Gln	Tyr Ile Ser Leu Arg	Leu Thr Val Leu Trp	Gly
155	160		165
Leu Gly Val Leu	Ile Arg Tyr Cys Phe	Leu Leu Pro Leu Arg	Ile
170	175		180
Ala Leu Ala Phe	Thr Gly Ile Ser Leu	Leu Val Val Gly Thr	Thr
185	190		195
Val Val Gly Tyr	Leu Pro Asn Gly Arg	Phe Lys Glu Phe Met	Ser
200	205		210
Lys His Val His	Leu Met Cys Tyr Arg	Ile Cys Val Arg Ala	Leu
215	220		225
Thr Ala Ile Ile	Thr Tyr His Asp Arg	Glu Asn Arg Pro Arg	Asn
230	235		240
Gly Gly Ile Cys	Val Ala Asn His Thr	Ser Pro Ile Asp Val	Ile
245	250		255
Ile Leu Ala Ser	Asp Gly Tyr Tyr Ala	Met Val Gly Gln Val	His
260	265		270
Gly Gly Leu Met	Gly Val Ile Gln Arg	Ala Met Val Lys Ala	Cys
275	280		285
Pro His Val Trp	Phe Glu Arg Ser Glu	Val Lys Asp Arg His	Leu
290	295		300
Val Ala Lys Arg	Leu Thr Glu His Val	Gln Asp Lys Ser Lys	Leu
305	310		315
Pro Ile Leu Ile	Phe Pro Glu Gly Thr	Cys Ile Asn Asn Thr	Ser
320	325		330
Val Met Met Phe	Lys Lys Gly Ser Phe	Glu Ile Gly Ala Thr	Val
335	340		345
Tyr Pro Val Ala	Ile Lys Tyr Asp Pro	Gln Phe Gly Asp Ala	Phe
350	355		360
Trp Asn Ser Ser	Lys Tyr Gly Met Val	Thr Tyr Leu Leu Arg	Met
365	370		375
Met Thr Ser Trp	Ala Ile Val Cys Ser	Val Trp Tyr Leu Pro	Pro
380	385		390

Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg
 395 400 405
 Val Lys Ser Ala Ile Ala Arg Gln Gly Gly Leu Val Asp Leu Leu
 410 415 420
 Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys
 425 430 435
 Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His
 440 445 450
 Lys Asp Arg Ser Arg Ser
 455

<210> 249
 <211> 1103
 <212> DNA
 <213> Homo sapiens

<400> 249
 gccctcgaa accaggactc cagcacctct ggtcccgccc tcaccggac 50
 ccctggccct cactctctct ccagggatgg cgctggcgcc tttgatgatc 100
 gcctcggca gcctcggcct ccacacctgg caggcccagg ctgttccacc 150
 catcctgccc ctgggacctg ctccagacac ctttgacgat acctatgttg 200
 gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
 atggcccacc atgccctgct gcgggaatcc tgggaggcag ccaggagac 300
 ctgggaggac aagcgtcgag ggcttacctt gccccctggc ttaaaagccc 350
 agaatggaat agccattatg gtctacacca actcatcgaa caccttgtac 400
 tgggagttda atcaggccgt gcggacgggc ggaggctccc gggagctcta 450
 catgaggcac ttctccctca aggccttga ttctacctg atccggggccc 500
 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggagggtg 550
 gtgttccgag gtgtgggcag ccttcgcttt gaaccaaga ggctggggga 600
 ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtgg 650
 cccacagatt tggggagaag aggcggggct gtgtgtctgc gccagggttg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tctgtctctg gccctggag agttccagct ctacggggtt gggccctgaa 800
 agtcaacat ctgccactta ggagccctgg gaacgggtga ccttcatatg 850
 acgaagaggc acctccagca gccttgagaa gcaagaacat ggttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttgccct ggggaggcca 950
 cagcagggct gagggaaact tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaagt actgaggcag ccacttgatt gaacggtgtt gcaatgtgga 1050

gacatggagt ttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu
1 5 10 15

His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly
20 25 30

Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu
35 40 45

Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala
50 55 60

His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr
65 70 75

Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys
80 85 90

Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn
95 100 105

Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly
110 115 120

Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His
125 130 135

Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly
140 145 150

Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser
155 160 165

Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly
170 175 180

Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe
185 190 195

Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu
200 205 210

Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr
215 220 225

Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro
230 235 240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

gtggcttcat ttcagtggtt gacttccaga gagcaatatg gctggttccc 50

caacatgcct caccctcatc tatatccttt ggcagctcac agggctcagca 100

gcctctggac ccgtgaaaga gctggtcggg tccgttgggt gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaac cctctttgtc accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300

ctcctgtaag ctccagaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccaccca ggagtagctg 400

ctgcatgtct acgagcacct gtcaaaagcct aaagtcacca tgggtctgca 450

gagcaataag aatggcaact gtgtgaccaa tctgacatgc tgcattgaaac 500

atggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550

aatgagtcct ataattgggtc catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcattc gcgttgccag gaaccctgtc agcagaaaat 650

tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700

ccagattcct ccattggtcct cctgtgtctc ctgttggtgc ccctctgtct 750

cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaaat 850

cctaacatat gcccccattc tggagagaac acagagtacg acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacy 1000

atgccagaca caccaaggtt atttgcctat gagaatgtta tctagacagc 1050

agtgactccc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	20 25 30
Gly Ser Val Gly	Gly Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	35 40 45
Lys Gln Val Asp	Ser Ile Val Trp Thr	Phe Asn Thr Thr Pro Leu	50 55 60
Val Thr Ile Gln	Pro Glu Gly Gly Thr	Ile Ile Val Thr Gln Asn	65 70 75
Arg Asn Arg Glu	Arg Val Asp Phe Pro	Asp Gly Gly Tyr Ser Leu	80 85 90
Lys Leu Ser Lys	Leu Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	95 100 105
Gly Ile Tyr Ser	Ser Ser Leu Gln Gln	Pro Ser Thr Gln Glu Tyr	110 115 120
Val Leu His Val	Tyr Glu His Leu Ser	Lys Pro Lys Val Thr Met	125 130 135
Gly Leu Gln Ser	Asn Lys Asn Gly Thr	Cys Val Thr Asn Leu Thr	140 145 150
Cys Cys Met Glu	His Gly Glu Glu Asp	Val Ile Tyr Thr Trp Lys	155 160 165
Ala Leu Gly Gln	Ala Ala Asn Glu Ser	His Asn Gly Ser Ile Leu	170 175 180
Pro Ile Ser Trp	Arg Trp Gly Glu Ser	Asp Met Thr Phe Ile Cys	185 190 195
Val Ala Arg Asn	Pro Val Ser Arg Asn	Phe Ser Ser Pro Ile Leu	200 205 210
Ala Arg Lys Leu	Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	215 220 225
Met Val Leu Leu	Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	230 235 240
Phe Val Leu Gly	Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	245 250 255
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	260 265 270
Thr Pro Asn Ile	Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	275 280 285
Thr Ile Pro His	Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	290 295 300
Asn Thr Val Tyr	Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	305 310 315
Pro His Ser Leu	Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctggttcccc aacatgcctc accctcatct atatcctttg gcagctcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcggtt ccgttgggtg 100
ggcctgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200
actatcatag tgaccacaaa tcgtaatatg gagagagtag acttcccaga 250
tgagggttac tccctgaagc tcagcaaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tcacgagcc ctcacccag 350
gagtagctgc tgcattgtcta cgagcacctg tcaaaagccta aagtcacat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500
caagcagcca atgagtgcca taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcactcg cgttgccagg aacctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagggtgct 650
gctgatgacc cagattcctc catggtctct ctgtgtctct tgttggtgcc 700
cctcctgctc agtctctttg tactggggct atttcttttg tttctgaaga 750
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgctcagca tgccagacac accaaggcta tttgcctatg agaattttat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtccctgacg acagacaato ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct gccctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
 cctagtctct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggctca cctcattaac gaaaaggatg gggaacacct ccagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaa atcattgacc 550
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
 gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
 tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttctttaa tttctcttg atacaccctt 800
 gacaattttt catgaaatta ttctcttcc tgttcaataa atgattaccc 850
 ttgcacttaa 860

<210> 256
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 256
 Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
 1 5 10 15
 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
 20 25 30
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
 35 40 45
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
 50 55 60
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
 65 70 75
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
 80 85 90
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
 95 100 105
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
 110 115 120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met
 125 130
 Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu
 140 145 150
 Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn
 155 160 165
 Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu
 170 175 180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
 ggctcgagcg ttcttgagcc aggggtgacc atgacctgct gcgaaggatg 50
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150
 tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200
 agcagggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
 agtggtatca cagtcattgg tgctctgtat tgcacgtgta tatccatcca 350
 ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtggttttt caatgactct tgtgcacctc ctactggttt 500
 caataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
 gtatttttag gtctattgct tgttggaatt ctggagggtc tgtttgggct 650
 cagtacagata gtcacgtgtt tccttggtg tctgtgtgga gtctctaagc 700
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu	50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg	65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe	80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser	95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser	110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp	125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser	140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr	155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu	170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu	185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile	200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg	215	220	225
Ser Gln Ile Val			

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
 gtcgaatcca aatcactcat tgtgaaagct gagctcacag ccgaataagc 50
 caccatgagg ctgtcagtggt gtctcctgat ggtctcgctg gccctttgct 100
 gctaccaggc coactgctctt gtctgccag ctgttgcttc tgagatcaca 150
 gtctctttat tcttaagtga cgctgcggta aacctccaag ttgccaaact 200
 taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcctgggtg 300
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctggtt 350
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaagggt 400

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgcc a gctcaggtga gccctcgcca aggtgacctc 50

gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg cccctcgaa tgtgacatgg 200

agagagtgc cctggccctt ctctactgag caggcctgac tgccttgga 250

gccaatgacc catttgcca taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgaggggac tgatctgcgg agggctcctg gccattgtgt 350

ggatcggggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc cactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gctgaagcc 500

taacactggc cccagcacc tctccccctg ggaggcctta tctcaagga 550

aggactttct tccaaggga ggctgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactog cccaccacc cctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Ala Gly Leu Thr
1 5 10 15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Gly
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50

ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100

actcctgctg ctggttgtgg gctcctggct actcgccgcg atcctggctt 150

ggacctatgc cttctataac aactgccggc ggctccagtg tttccacag 200

ccccaaaac ggaactggtt ttggggtcac ctgggcctga tcaactctac 250

agaggagggc ttgaaggact cgaccagat gtggccacc tattccagg 300

gctttacggt atggctgggt cccatcatcc ccttcacgt tttatgccac 350

cctgacacca tccggtctat caccaatgcc tcagctgccca ttgcacccaa 400

ggataatctc ttcacaggt tctgaagcc ctggctggga gaagggatac 450

tgctgagtgg cggtgacaag tggagccgcc accgtcggat gctgacgccc 500

gccttcatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550

tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600

gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650

cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtg 700

atatattgcc accatcttgg agctcagtg ccttgtagag aaaagaagcc 750

agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800

cggcgcttcc acagggcctg ccgcctggtg catgaactca cagacgctgt 850

catccgggag cggcgctgca cctcccccac tcagggtatt gatgattttt 900

tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcattg ttggaggcca tgacaccacg gccagtggcc 1050
 tctctcgggt cctgtacaac cttgcgaggg acccagaata ccaggagcgc 1100
 tgcgcacagg aggtgcaaga gcttctgaag gaccgcgato ctaaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgacctg tgctgtaagg 1200
 agagcctgag gttacatccc ccagctccct tcattcccg atgctgcacc 1250
 caggacattg ttctcccaga tggccgagtc atcccaaaag gcattacctg 1300
 cctcatcgat attatagggg tccatcacaa cccaactgtg tggccggatc 1350
 ctgagggtcta cgaccccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctccga gggcccagga actgcacgg 1450
 gcaggcggtc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
 tgcaattccg gttcctgcc aaccacactg agccccgcag gaagctggaa 1550
 ttgatcatgc gcgcgaggg cgggctttgg ctgcgggtgg agccctgaa 1600
 tgtaggcttg cagtgcactt ctgaccctc cactgtttt tttgcagatt 1650
 gtcataaata aaacggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
 1 5 10 15
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
 125 130 135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met
				140					145					150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr
				155					160					165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His
				170					175					180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile
				185					190					195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe
				200					205					210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile
				215					220					225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu
				230					235					240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg
				245					250					255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val
				260					265					270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp
				275					280					285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp
				290					295					300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp
				305					310					315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His
				320					325					330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala
				335					340					345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu
				350					355					360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu
				365					370					375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg
				380					385					390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp
				395					400					405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys
				410					415					420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro
				425					430					435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser
				440					445					450

Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460					465
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475					480
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490					495
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505					510
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 265
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
 ctggcctcct gctgtttgct tttcacagga ttcttaaato ctctcttattc 100
 tttctctctc ctgactcca gggaaatatc ctttcaactc tcagcacctc 150
 atgaagacgc gcgcttaact cgggaggagc tagaaagagc ttcccttcta 200
 cagatatgtc cagagatgct gggtgcagaa agaggggata ttctcaggaa 250
 agcagaactca agtaccaca tttttaacc aagaggaaat ttgagaaagt 300
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350
 gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400
 gaaatactgt gtctgaagt aaataagcat ctgttagtca gctcagaaac 450
 acccatotta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
 tggagaaaaa ctaggcaaac tacacctgt tcattgttac ctggaaaaa 550
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
 <211> 124
 <212> PRT
 <213> Homo sapiens

Met	Tyr	Lys	Leu	Ala	Ser	Cys	Cys	Leu	Leu	Phe	Thr	Gly	Phe	Leu
1				5						10				15
Asn	Pro	Leu	Leu	Ser	Leu	Pro	Leu	Leu	Asp	Ser	Arg	Glu	Ile	Ser
				20					25					30
Phe	Gln	Leu	Ser	Ala	Pro	His	Glu	Asp	Ala	Arg	Leu	Thr	Pro	Glu
				35					40					45
Glu	Leu	Glu	Arg	Ala	Ser	Leu	Leu	Gln	Ile	Leu	Pro	Glu	Met	Leu
				50					55					60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 70
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120
Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
gaacatTTTT agttcccaag gaattgacat cagccccacg gaagctagcg 50
cacctctggg atgggggttg tggtttaaaa caaacgccag tcaoctata 100
taaggacctg acagccacca ggcaccacct cgcagcagaa ctgcaggccc 150
acctgtctgc aaccagctg agggccatgcc ctccccagg accgtctgca 200
gcctctgct cctcggcatg ctctggctgg acttgccat ggcaggctcc 250
agcttctga gccctgaaca ccagagagtc cagcagagaa aggagtcaa 300
gaagccacca gccaaagctg agccccgagc ttagcaggc tggctccgcc 350
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccg 400
ttcaacgccc cctttgatgt tggaatcaag ctgtcagggg ttcagtaca 450
gcagcacagc caggccctgg ggaagttct tcaggacatc ctctgggaag 500
aggccaaaga ggccccagcc gacaagtgat cgcaccaca ccttactcac 550
ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgcag 600
caactccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met
1 5 10 15
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 269
 cggccacagc tggcatgctc tgcctgatcg ccactcctgct gtatgtcctc 50
 gtccagtacc tcgtgaacc cggggtgctc cgcacggacc ccagatgtca 100
 agaatatgaa cactgggctg ctgttctctc cctgttctcc ggtgcagggtg 150
 cagaccctga tagtcgtgat catcgggatg ctctgtctcc tgcaggactt 200
 tcttggtctg gtgcacctgg gccagctgct catcttccac atctacctga 250
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtoaga 300
 gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagcccc 350
 cagccttggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
 cagcctctcc cagaagttag atcatggaca aaaagggcaa atcacaggaa 450
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
 gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
 aaataaggac aggtggactt ccaaaaacac aagtagaaat tctaacaatg 650
 aaatatatta caggcagggt acccactaac caaacaactg aagcgagagc 700
 tgtgtgtctg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750
 gttgtgtaac gacggagggt aaactcccca gccccaagaa aacctgtgtt 800
 ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgt 850
 tgggccagct gcaaagcgtc ttccattctc tgggcagtggt tggccccgag 900
 gctgtggcct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950
 aggccagccc ccaagaatgc cctgctcctg acagcttggc caaccctgg 1000
 tcagggcaga gggagttggg tgggtcaggc tctgggctca cctcatctc 1050

cagagcatcc cctgctgca gtgtggcaa gaacgccag ctgagaatga 1100
 acacacccca ccaagagcct cctgttcat aaccacaggt taccctacaa 1150
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcatacttt acagtcaactg ttgtcttgcc tgagggttga attttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
 ggagtgcaga tggcatcctt cgttcttcc agacaagctg caagacgtg 50
 accatggcca agatggagct ctogaaggcc ttctctgccc agcggaact 100
 cctatctgcc atcctcagca tgctatcaact cagcttctcc acaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaag gtctggcagc caagtgcctt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga ccggttctcc ttccggagct tccggagtgg catgtggcta 350
 tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccacctc tccgatttgg aggggaagcgg 500
 ttgatggaga aggettccct cccctccct cccctggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttoaa 600
 ttcatcagct tctctctgct actaacagac ttgtactcta ctgggaaccc 650
 tgcctgtggg ctcaaaactga gcgcctttgc tgctgtttcc tctgtcctgt 700
 caggtctcct ggggatgggt gccacatga tgtattcaca agtcttccaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggctggggc ttctacatgg cctggctctc cttcacctgc tgcattggct 850
 cggtctgcac caccttcaac acgtacacca ggatgggtgt ggagtccaag 900
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950
 ccatcagtg ttcctcggc ggctgtcaag tgcagcccc accgtgggtc 1000
 ctttgaccag ctaccaccag tatcataato agccatcca ctctgtctct 1050
 gagggagtgc acttctactc cgagctgcgg aacaaggat ttcaaaagg 1100
 ggccagccag gagctgaaa aagcagttag gtcatctgta gaggaagagc 1150
 agtgtagga gttaagcggg ttggggagt aggcctgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250
 atggttttta gaggctacga ataaggctat gaataagggt tatctttaag 1300
 tcctaaggga ttctgggtg ccaactgctct cttttctct acagctccat 1350
 cttgtttcac ccaccccaca tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaagatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met	Ala	Lys	Met	Glu	Leu	Ser	Lys	Ala	Phe	Ser	Gly	Gln	Arg	Thr
1				5					10					15
Leu	Leu	Ser	Ala	Ile	Leu	Ser	Met	Leu	Ser	Leu	Ser	Phe	Ser	Thr
			20						25					30
Thr	Ser	Leu	Leu	Ser	Asn	Tyr	Trp	Phe	Val	Gly	Thr	Gln	Lys	Val

	35		40		45
Pro Lys Pro Leu Cys Glu Lys Gly Leu Ala Ala Lys Cys Phe Asp	50		55		60
Met Pro Val Ser Leu Asp Gly Asp Thr Asn Thr Ser Thr Gln Glu	65		70		75
Val Val Gln Tyr Asn Trp Glu Thr Gly Asp Asp Arg Phe Ser Phe	80		85		90
Arg Ser Phe Arg Ser Gly Met Trp Leu Ser Cys Glu Glu Thr Val	95		100		105
Glu Glu Pro Gly Glu Arg Cys Arg Ser Phe Ile Glu Leu Thr Pro	110		115		120
Pro Ala Lys Arg Gly Glu Lys Gly Leu Leu Glu Phe Ala Thr Leu	125		130		135
Gln Gly Pro Cys His Pro Thr Leu Arg Phe Gly Gly Lys Arg Leu	140		145		150
Met Glu Lys Ala Ser Leu Pro Ser Pro Pro Leu Gly Leu Cys Gly	155		160		165
Lys Asn Pro Met Val Ile Pro Gly Asn Ala Asp His Leu His Arg	170		175		180
Thr Ser Ile His Gln Leu Pro Pro Ala Thr Asn Arg Leu Ala Thr	185		190		195
His Trp Glu Pro Cys Leu Trp Ala Gln Thr Glu Arg Leu Cys Cys	200		205		210
Cys Phe Leu Cys Pro Val Arg Ser Pro Gly Asp Gly Gly Pro His	215		220		225
Asp Val Phe Thr Ser Leu Pro Ser Asp Cys Gln Leu Gly Ser Arg	230		235		240
Arg Leu Glu Thr Thr Cys Leu Glu Leu Trp Leu Gly Leu Leu His	245		250		255
Gly Leu Ala Leu Leu His Leu Leu His Gly Val Gly Cys His His	260		265		270
Leu Gln His Val His Gln Asp Gly Ala Gly Val Gln Val Gln Ala	275		280		285

<210> 273
 <211> 1158
 <212> DNA
 <213> Homo sapiens

<400> 273
 aactggaag aaagaaagaa aggtcagctt tggcccagat gtggttaccc 50
 cttggtctcc tgtctttatg tctttctcct cttcctattc tgcctatccc 100
 ctacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150
 ctctggtagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgtcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cctgccttat tctctctccc aagtctgttc tottattgtc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag ccccaggaga aatggaggag cttttagacc 500
 acctccctgt cagccagtat taacatgtcc ccttccccct gcccccgcgt 550
 agattcagga cattgcgccc tgtgtgccac caaaccagga ctttccccct 600
 ggcctggcat ccctggctct ctctggtac ccagcaagac gtctgttcca 650
 gggcagtgtg gcactcttca agctccgtta ctatggcgat ggccatgatg 700
 ttacaatccc acttgccctga ataatacaagt gggaaggagg agcagaggga 750
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaaggga agcaacagga acttctgcaa ctggttttta tcggaagat 850
 catctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aagtgcagggt gtgtaaggaa atagaacagt ctgctgggag 950
 tcagacctgg aattctgatt ccaaaactctt tattactttg ggaagtcact 1000
 cagcctcccc gtagccatct ccagggtgac ggaaccocagt gtattacctg 1050
 ctggaaccaa ggaaactaac aatgtaggtt actagtgaat accccaatgg 1100
 tttctccaat tatgcccatg ccaccaaaac aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

Met	Trp	Leu	Pro	Leu	Gly	Leu	Leu	Ser	Leu	Cys	Leu	Ser	Pro	Leu
1				5					10					15
Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln
				20					25					30
Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn
				35					40					45
Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly
				50					55					60
Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg
				65					70					75
Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu				
				80					85					

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
 gtatgcgcgtc ttgggtctcc cggctgcgcg tgctgccgcg gccgcctcgg 50
 gtctgtggagc caggagcgac gtcaccgcga tggcaggcat caaagctttg 100
 attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgccttc ccaatatata acaataactg gccctctttt gttctatttt 200
 tttacatcct ttcacotatt coatactgca tagoaagaag attagtggat 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtctgtgcag cttttggact cctattgta tttgccagag 350
 cacatctgat tgagtgggga gcttgtgcac ttgttctcac aggaacacac 400
 gtcatctttg caactatact aggcctttttc ttggtctttg gaagcaatga 450
 cgacttcagc tggcagcagt ggtgaaaaga aataactgaa ctattgtcaa 500
 atggacttcc tgtcatttgt tggccattca cgcacacagg agatgggggc 550
 gtaaatgctg aatgggtatg caagcctctt ggggggtatt taggtgctcc 600
 cttctcactt ttattgtaag catactattt tcacagagac ttgctgaagg 650
 attaaaagga ttttctcttt tggaaaagct tgactgtatt cacacttacc 700
 tatagtatgc tttttgtggt gtctgtctga atttaaatat ttatgtgttt 750
 ttctgttagg gttgattttt tttggaatca atatgcaatg ttaaacactt 800
 ttttaagtga atcatttgca ttggttagga attcagaatt ccgccggctc 850
 tattactggt caagtacatc ttttctctta aaattattta gccctcatta 900
 ttacaaaaaa ttataaaaaa aagttttcag tcagtcagga tgacatcact 950
 cccaatgtta tgcagacata cagacggttg gatacgtta tagactgtat 1000
 actcagtgca aatatagctg catttatacc tcagaggggc caagtgttaa 1050
 tgcocatgcc ctccgttaag ggtgtttggt tttactggta gacagatgtt 1100
 ttgtggattg aaaattattt tatggaattg ctacagagga gtgcttttct 1150
 tctcaattgt tagaagaatt tatgttaaac ttaaggtaa ggggttaaaa 1200
 acatttttga gataaggttt ttatttatgt ttattattgt tagagtgtat 1250
 tgcaatgtgg gaagaaatga cattgaaatt ccagtttttg aatcctgttt 1300
 ctatttataa gtgaaatttg tgatctocta tcaacctttc atgttttacc 1350
 ctgttaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400
 gtttgcatca tatatgccag aaaaccttcc tctgcttctt ccttttgact 1450

tatttggtat gttgtatata ttacataaaa taacttttca aatatagttt 1500
 aataacactt agaagtgttt acttacctgg aaaataattg ctatgcgcta 1550
 cattcagagt gccccctccc ctgcaaggcc ttgccatgat taacaagtaa 1600
 cttgttagtc ttacagataa ttcattgcatt aacagtttaa gatttagacc 1650
 atggtaatag tagttcttat tctctaaggt tatatcatat gtaattttaa 1700
 agtattttta agacaagttt cctgtatacc tctgaactgt tttgattttg 1750
 agttcatcat gatagatctg ctgtttcctt ataaaaggca tttgttgtgt 1800
 gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850
 acctgaccaa aaaattccca gtaaccaggc atgatcaatt tatagtggtc 1900
 gtttcatctc aataattatc aggacttttt tcaggagtgg gttataaaaa 1950
 cattcaagtt ggtctgacag tatttttgta aggataattg tttgtatgtt 2000
 tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050
 aatcatgaca gctgtctgtt gttttatgaa gtttatttct caagaaaaatg 2100
 ggaataaatt tgggatttgt tcagcttttt tactaaagat gcctaaagcc 2150
 acaggtttta ttgcctaact taagccatga cttttagata tgagatgacg 2200
 ggaagcagga cgaatatatc gctgtgggct ggagccttcc cactggaggc 2250
 tgaaagtggc ttgtggtatt ataatttca gatttcaaga ggaaggtgca 2300
 ggtacacatg agttagagag ctggtagagc agttgggaac tcttttgctc 2350
 tgtgatctac tggacttttt ttttgcagga agtgcattct ctggctcttc 2400
 cctattttct gttctggatg tcagtgcagt gcaactgctac tgttttatcc 2450
 acttggccac agactttttc taacagctgc gtattatttc tatatactaa 2500
 ttgcattggc agcatttgtt ctttgacctt gtatactagc ttgacatagt 2550
 gctgtctctg atttttaggc tagttacttg agatatgaat tttccataga 2600
 atatgcactg atacaacatt accattcttc tatggaaaga aaacttttga 2650
 tgatgaaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 276
 Met Ala Gly Ile Lys Ala Leu Ile Ser Leu Ser Phe Gly Gly Ala
 1 5 10 15
 Ile Gly Leu Met Phe Leu Met Leu Gly Cys Ala Leu Pro Ile Tyr
 20 25 30
 Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

	35		40		45
Pro Ile Pro Tyr	Cys Ile Ala Arg Arg	Leu Val Asp Asp Thr	Asp		
	50	55	60		
Ala Met Ser Asn Ala Cys Lys Glu Leu	Ala Ile Phe Leu Thr	Thr			
	65	70	75		
Gly Ile Val Val Ser Ala Phe Gly Leu	Pro Ile Val Phe Ala Arg				
	80	85	90		
Ala His Leu Ile Glu Trp Gly Ala Cys	Ala Leu Val Leu Thr	Gly			
	95	100	105		
Asn Thr Val Ile Phe Ala Thr Ile Leu	Gly Phe Phe Leu Val Phe				
	110	115	120		
Gly Ser Asn Asp Phe Ser Trp Gln Gln Trp					
	125	130			

<210> 277
 <211> 4104
 <212> DNA
 <213> Homo sapiens

<400> 277
 cccacgcgct cgcgccacgc tccgccacgc cgtccgccca cgcgtccgcc 50
 caccgctccg cccacgcgct cgcgccacgc tccggtgcaa gctcgccgcc 100
 cacactgcct ggtggaggga aggagcccg cgcctctcgc ccgctcccc 150
 cgcgcgcgtc cgcacctccc caccgcccgc cgcgcgcgc cgcgcgcgc 200
 caaagcatga gtgagccgc tctctgcagc tgcccggggc gcaaatggca 250
 ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggt cgtttccaat 300
 gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350
 ttggagtttt ttccccccac aacgtcacag tccgaactgc agaggggaaag 400
 gaaggcggca ggaaggcgaa gctcgggctc cggcacgtag ttgggaaact 450
 tgcgggtcct agaagtgcgc tccccgcctt gccggccgcc cttgcagccc 500
 cgagccgagc agcaaagtga gacattgtgc gcctgccaga tccgcgcgcc 550
 gcggaccggg gctgcctcgg aaacacagag ggggtcttctc tcgcccctga 600
 tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtcactct 650
 ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtctc 700
 tctggaaaga ttctcgctaa tggatttctc gctcgtcgtt ctctgtctat 750
 actggctgct gaggaggccc tcgggggttg tctgtgtctc gctgggggcc 800
 tgctttcaga tgctgccgc cgcgccacgc gggtgccgc agctgtgccg 850
 gtgcgagggg cggctgctgt actgcaggc gctcaacctc accgaggcgc 900
 cccacaaect gtccggcctg ctgggcttgt ccctgcgcta caacagcctc 950

tcggagctgc gcgccggcca gttcacgggg ttaatgcagc tcacgtggct 1000
 ctatctggat cacaatcaca tctgctccgt gcagggggac gcctttcaga 1050
 aactgcgccg agttaaggaa ctcacgtga gttccaacca gatcacccaa 1100
 ctgcccacaa ccaccttccg gcccatgccc aacctgcgca gctgggacct 1150
 ctctacaac aagctgcagg cgtctgcgcc cgacctctc cacgggctgc 1200
 ggaagctcac cacgtgcat atgcggggcca acgccatcca gtttgtgccc 1250
 gtgcgcatct tccaggactg ccgcagcctc aagtttctcg acatcgata 1300
 caatcagctc aagagtctgg cgcgcaactc tttcgcggc ttgtttaagc 1350
 tcaccgagct gcacctcgag cacaacgact tggtaagggt gaacttcgcc 1400
 cacttccgcg gcctcatctc cctgcactcg ctctgcctgc ggaggaaaca 1450
 ggtggccatt gtggtcagct cgtcgactg ggtttggaac ctggagaaaa 1500
 tggacttgtc gggcaacgag atcgagtaca tggagcccca tgtgttcgag 1550
 accgtgcccg acctgcagtc cctgcagctg gaactccaacc gcctcaccta 1600
 catcgagccc cggatccctca actcttgaa gtccctgaca agcatcacc 1650
 tggccgggaa cctgtgggat tgcggggcga acgtgtgtgc cctagcctcg 1700
 tggctcagca acttccaggg gcgctacgat ggcaacttgc agtgcgccag 1750
 ccggagtag gcacagggcg aggcgtcct ggacgcgtg tacgccttcc 1800
 acctgtcgca ggtgggggc gagcccacca gcggccacct gctctcgccc 1850
 gtcaccaacc gcagtgatct ggggccccct gccagctcgg ccaaccagct 1900
 cgcggacggc ggggaggggc agcacgacgg cacattcgag cctgccaccg 1950
 tggctcttcc agggggcgag cagcccgaga acgcccgtga gatccacaag 2000
 gtggtcacgg gcacatggc cctcatcttc tcttctctca tctgtgtcct 2050
 ggtgctctac gtgtctgga agtgtttccc agccagcctc aggcagctca 2100
 gacagtgett tgtcacgag cgcaggaagc aaaagcagaa acagaccatg 2150
 catcagatgg ctgcoatgct tgcacaggaa tactacgttg attacaacc 2200
 gaaccacatt gagggagccc tggatgatcat caacgagtat ggtcgtgta 2250
 cctgccacca gcagcccgcg agggaatgag aggtgtgatt gtcccagtgg 2300
 ctctcaacc atgcgctacc aaatacgctt gggcagccgg gacggggccc 2350
 cgggcaccag gctggggctc cctgtctgt gctctgatat gctccttgac 2400
 tgaaccttta aggggatctc tccagagac ttgacatttt agctttattg 2450
 tgtcttaaaa acaaaagcga attaaaacac acaaaaaaac cccacccac 2500
 aaacctcagg acagtctatc ttaaatctca tatgagaact cctctctccc 2550

tttaagatc tgtccatatt caggaatctg agagtgtaaa aaagggtgcc 2600
 ataagacaga gagagaataa tcgtgctttg ttttatgcta ctctctccc 2650
 cctgcccattg attaaacatc atgtatgtag aagatcttaa gtccatacgc 2700
 atttcatgaa gaaccattgg aaagaggaat ctgcaatctg ggagcttaag 2750
 agcaaatgat gaccatagaa agctatgttc ttactttgtg tgtgtgtctg 2800
 tatgtttctg cgttgtgtgt cttttagggc aagcaaacgt tgtctacaca 2850
 aacgggaatt tagctcacat catttcatgc ccctgtgcct ctagtctctg 2900
 agattggtgg ggggaggtgg ggggaaacgg caggaataag ggaagtgtg 2950
 agttttaact aaggttttgt aaccttgaa atcttttctt tctcaaatta 3000
 attatcttta agcttcaaga aacttgctct gacccctcta agcaaacctac 3050
 taagcattta aaagagaatc taatttttaa aggtgtagca cttttttttt 3100
 tattcttccc acagagggtg ctaatctcat tatgctgtgc tatctgaaaa 3150
 gaacttaagg ccacaattca cgtctcgtcc tgggcattgt gatggattga 3200
 ccctccattt gcagtacett ccagctgat taaagttcag cagtgtgatt 3250
 gaggttttcc gaatatattat atagaaaaaa agtcttttca catgacaaat 3300
 gacactctca caccagctct agccctagta gttttttagg ttggaccaga 3350
 ggaagcaggt taaatgagac ctgtcctctg ctgcactcag aaaaaatagg 3400
 cagtcctctg tgctcagatc tttagccttg tattaatagt tgagaccacc 3450
 taccacaat gcagcctata ctccaagac tacaaagtta ccatcgcaaa 3500
 ggaaagggtt ttccagtaaa aggaaatagt tttctcaacc atttaaaaa 3550
 attcttctga actcatcaaa gtagaagagc cccaacacct ttctctctgc 3600
 ctcaagaag gcagacattt ggtatgattt agcatcaaca acacatttat 3650
 gagtatatgt aagtaatcag aggggcaaat gccacttgtt attcctccca 3700
 agttttccaa gcaagtacac acagatctct ggtaggatta ggggccactt 3750
 gtgtttccgg cttatttttag tcgacttgtc agcaagtttg atgcctagtc 3800
 tatctgacat ggcccagtag aacaggggcat tgatggatca catgagatgg 3850
 tagaaggaa atcatcacat acccctctca cagagaaaa tatcaaagaa 3900
 ccagaaatta tatctgtttt ggagcaagag tgcataaatg ttccagggtg 3950
 gtcaaaaata acataaatta tctcctctag atgagtggcg atgttggtctg 4000
 atttgggtct gccattgaca gaattgtcaaa taaaaggaa tttagtagaa 4050
 tatgaccatt aaatgtgctt ctgaaatata ttttgagata ggtttagaat 4100
 gtca 4104

<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg	
1				5					10					15	
Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	
			20						25					30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	
			35						40					45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	
			50						55					60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	
			65						70					75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	
			80						85					90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	
			95						100					105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	
			110						115					120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	
			125						130					135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	
			140						145					150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	
			155						160					165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	
			170						175					180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	
			185						190					195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	
			200						205					210	
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	
			215						220					225	
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	
			230						235					240	
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	
			245						250					255	
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	
			260						265					270	
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	
			275						280					285	

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu
				290					295					300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu
				305					310					315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser
				320					325					330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro
				335					340					345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe
				350					355					360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu
				365					370					375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser
				380					385					390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr
				395					400					405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu
				410					415					420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu
				425					430					435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp
				440					445					450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val
				455					460					465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met
				470					475					480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn
				485					490					495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys
				500					505					510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val			
				515					520					

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

tccgtgcagg gggacgcctt tcagaaactg cgccgagtta aggaac 46

<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
 gtgcaaggag cagagggcag atgggcggtc tggggcgggt cctgctgtgg 50
 ctgcagctct gcgcactgac ccaggcggtc tccaaactct ggggtcccaa 100
 caccgacttc gacgtcgag ccaactggag ccagaaccgg acccctgtcg 150
 ccggcgggcg cgttgagttc ccggcgga agatggtgtc agtctgtgtg 200
 caagaaggtc acgctgtc agacatgtc ctgcccgttg atggggaact 250
 cgtctgggtc tcaggagccg gattcgcggt ctcagacgtg ggctcgacc 300
 tggactgtg cgcggggcga cctgcgtct tccgcgactc tgaccgcttc 350
 tcttgcatg acccgacact gtggcgctct ggggacgagg cacctggcct 400
 cttcttctg gacgccgagc gcgtgccctg ccggccagac gacgtcttct 450
 ttccgctag tgctctcttc cgcgtggggc tcggcccttg cgctagcccc 500
 gtgcgtgtcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550
 ggacctgggt gttttctctg cgtcccgcg gggccgccta cgcttcacag 600
 ggccggggcg cgtgagcgtg gggcccgagg actgcgcgga ccgctggggc 650
 tgcgtctgcg gcaacgcgga ggcgcagccg tggatctgcg cggccctgct 700
 ccagcccct 709

<210> 281
 <211> 229
 <212> ERT
 <213> Homo sapiens

<400> 281
 Met Gly Val Leu Gly Arg Val Leu Leu Trp Leu Gln Leu Cys Ala
 1 5 10 15
 Leu Thr Gln Ala Val Ser Lys Leu Trp Val Pro Asn Thr Asp Phe
 20 25 30
 Asp Val Ala Ala Asn Trp Ser Gln Asn Arg Thr Pro Cys Ala Gly
 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225

Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
atcgcatcaa ttgggagtag catcttcctc atgggaccag tgaacacagct 50
gaagcgaatg tttagccta ctgcttgat tgcaactatc atggtgctgt 100
tgtgttttgc acttaccctg tgttctgcct ttgggtggca taacaaggga 150
cttgactta tcttctgcat ttgcagtcct ttggcattga cgtggtacag 200
ccttctctc ataccattg caagggatgc tgtgaagaag tgttttgccg 250
tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
tggacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350
tacagacatg tgccctttat ctgcagcaa tgtgttgctt gtgattcgaa 400
catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500
cctcatgtac ctgtttctc tctggatgtt gtccactga attccatga 550
atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg
1 5 10 15
Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe	Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe				
	35		40		45
Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe					
	50		55		60
Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys					
	65		70		75

Leu Ala

<210> 284
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 284
 ttgagcgcag gtgagctcct gcgcgttccg gggcgcttcc tccagtcacc 50
 ctccccccgt taccgcggcg gcgcggcgagg gagtctctcc cagaccctcc 100
 ctcccggtgc tccaaactaa tacggactga acggatcgct gcgagggtgg 150
 gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
 ccagatagat tatctttacac tgaactgatc aagtactttg aaaatgactt 250
 cgaatttat ctgtgtgtcc ttcatacttg ctgcaactgag tctttcaacc 300
 accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350
 tggattccgt tgggattact tatataaagt tccaacgccc cattttcatt 400
 atattatgaa atatggtgtt cacgtgaagc aagtactacta tgtttttatt 450
 acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500
 gaatcatggg attgttgcaa atgatatggt tgatcctatt cggacaacaa 550
 ctttctcctt ggatcacatg aatatttatg attccaagtt ttgggaagaa 600
 gcgacaccaa tatggatcac aaaccagagg gcaggacata ctagtgggtgc 650
 agccatgtgg ccggaacag atgtaaaaat acataagcgc tttctactc 700
 attacatgcc ttacaatgag tcagtttcat ttgaagatag agttgccaac 750
 attgttgaat ggtttacgtc aaaagagccc ataaatcttg gtcttctcta 800
 ttgggaagac cctgatgaca tgggccacca tttgggacct gacagtccgc 850
 tcatggggcc tgtcatttca gatattgaca agaagttagg atatctcata 900
 caaatgctga aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950
 aagtgatcat ggaatgacgc agtgctctga gaaaaggta atagaacttg 1000
 accgatacct ggataaagac cactataccc tgattgatca atctccagta 1050
 gcagccatct tgccaaaaga aggtaaaatt gatgaagtct atgaagcact 1100

aactcacgct catcctaatac ttactgttta caaaaaagaa gacgttccag 1150
aaaggtggca ttacaaatac aacagtcgaa ttcaaccaat catagcagtg 1200
gctgatgaag ggtggccatc ttacagaat aagtcagatg actttctgtt 1250
aggcaaccac ggttacgata atgcgttagc agatattgat ccaatatatt 1300
tagcccatgg tctgtccttc agaaagaatt tctcaaaaga agccatgaac 1350
tccacagatt tgtaccact actatgccac ctctcaata tcaactgcat 1400
gccacacaat ggatcattct ggaatgtcca ggatctgtct aattcagcaa 1450
tgccaagggt ggtcctctat acacagagta ctatactcct ccttggtagt 1500
gttaaaccag cagaatatga ccaagagggg tcataccctt atttcatagg 1550
ggtctctctt ggcagcatta tagtgattgt attttttgta atttctatta 1600
agcatttaac tcacagtcaa atacctgctt tacaagatat gcactgtgaa 1650
atagctcaac cattattaca agcctaattg tactttgaag tggatttgca 1700
tattgaagtg gagattccat aattatgtca gtgtttaaag gtttcaaat 1750
ctgggaaacc agttccaaac atctgcagaa accattaagc agttacatat 1800
ttagtatac acacacacac acacacacac atacacacac acggaccaaa 1850
atacttacac ctgcaaagga ataaagatgt gagagtatgt ctccattgtt 1900
cactgtagca tagggataga taagatcctg ctttatttgg acttggcgca 1950
gataatgtat atatttagca actttgcact atgtaaaagta ccttatatat 2000
tgcaacttaa atttctcttc tgatgggtac ttttaattga aatgcacttt 2050
atggacagtt atgtcttata acttgattga aaatgacaac tttttgcacc 2100
catgtcacag aatacttggt acgcattgtt caaactgaag gaaatttcta 2150
ataatcccg aataatgaac tagaaatcta tctccataaa ttgagagaag 2200
aagaaggtga taagtgttga aaattaaatg tgataacctt tgaaccttga 2250
attttggaga tgtattccca acagcagaat gcaactgtgg gcatttcttg 2300
tcttatttct ttccagagaa cgtggttttc atttattttt ccttcaaaag 2350
agagtcaaat actgacagat tegtctctaa tatattgttt ctgtcataaa 2400
attatttgta tttcctgatg agtcatatta ctgtgatttt cataataatg 2450
aagacaccat gaatatactt ttcttctata tagttcagca atggcctgaa 2500
tagaagcaac caggccacct ctacagcaatg ttttctcttg tttgtaatta 2550
tttgcctcct tgaataatga atcactatta attacattaa aaatcaaat 2600
ggataaaaaa aaaaaaaaaa aaa 2623

<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu
1				5					10					15
Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val
				20					25					30
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
				35					40					45
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
				50					55					60
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
				65					70					75
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
				80					85					90
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
				95					100					105
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala
				110					115					120
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly
				125					130					135
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe
				140					145					150
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp
				155					160					165
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile
				170					175					180
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His
				185					190					195
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp
				200					205					210
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala
				215					220					225
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly
				230					235					240
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr
				245					250					255
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala
				260					265					270
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala
				275					280					285
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp

	290		295		300
Val Pro Glu Arg	Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro			
	305	310			315
Ile Ile Ala Val	Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys			
	320	325			330
Ser Asp Asp Phe	Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu			
	335	340			345
Ala Asp Met His	Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg			
	350	355			360
Lys Asn Phe Ser	Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro			
	365	370			375
Leu Leu Cys His	Leu Leu Asn Ile Thr	Ala Met Pro His Asn Lys			
	380	385			390
Ser Phe Trp Asn	Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg			
	395	400			405
Val Val Pro Tyr	Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val			
	410	415			420
Lys Pro Ala Glu	Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile			
	425	430			435
Gly Val Ser Leu	Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile			
	440	445			450
Phe Ile Lys His	Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp			
	455	460			465
Met His Ala Glu	Ile Ala Gln Pro Leu	Leu Gln Ala			
	470	475			

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
 ggatttttgt gatccgcat tcgctccac gggggggacc tttgtaactg 50
 cgggaggccc aggacaggcc caccctgogg ggccggaggc agccgggggtg 100
 agggaggtga agaaaccaag acgcagagag gccaaagcccc ttgccttggg 150
 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcaggggccaa 250
 ggtggctccc gctgagagga tgagcaagtt ctttaaggcac ttcacggctg 300
 tgggagacga ctaccatgcc tggaacatca actacaagaa atggggagaat 350
 gaagaggagg aggaggagga ggagcagcca caccacacac cagtctcagg 400
 cgaggaaggc agagctgcag ccctgcagct tgccctgcc cctggccccg 450
 caccagggc ccccttgac ttcaggggca tgttgaggaa actgttcagc 500

tcccacaggt ttcaggtcat catcatctgc ttggtggttc tggatgccct 550
 cctggtgctt gctgagctca tcttggacct gaagatcaco cagcccaca 600
 agaataacta tgctgccatg gtattccact acatgagcat caccatcttg 650
 gtctttttta tgatggagat catctttaaa ttatttgtct tccgcctgag 700
 ttctttcacc acaagtttga gatcctggat gcccgctgtg gtgggtggtc 750
 catctatcct ggacattgtc ctctgttcc aggagcacca gtttgaggct 800
 ctgggcctgc tgattctgct ccgctgtgg cgggtggccc ggatcatcaa 850
 tgggattatc atctcagtta agacacgttc agaacggcaa ctcttaaggt 900
 taaaacagat gaatgtacaa ttggccgcca agattcaaca ccttgagttc 950
 agctgctctg agaagccctt ggactgatga gtttgctgta tcaacctgta 1000
 aggagaagct ctctccggat ggctatggga atgaaagaat ccgacttcta 1050
 ctctcacaca gccaccgtga aagtcctgga gtaaaatgtg ctgtgtacag 1100
 aagagagaga aggaagcagg ctggcatgtt cactgggctg gtgttacgac 1150
 agagaacctg acagtcaactg gccagttatc acttcagatt acaaatcaca 1200
 cagagcatct gcctgttttc aatcacaga gaacaaaacc aaaatctata 1250
 aagatattct gaaaatatga cagaatttga caaataaaag cataaacgtg 1300
 taaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaa 1337

<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met Ala Thr Trp Asp Glu Lys Ala Val Thr Arg Arg Ala Lys Val
 1 5 10 15
 Ala Pro Ala Glu Arg Met Ser Lys Phe Leu Arg His Phe Thr Val
 20 25 30
 Val Gly Asp Asp Tyr His Ala Trp Asn Ile Asn Tyr Lys Lys Trp
 35 40 45
 Glu Asn Glu Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr
 50 55 60
 Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Pro Asp Val Ala
 65 70 75
 Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly
 80 85 90
 Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile
 95 100 105
 Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu
 110 115 120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288
 <211> 3334
 <212> DNA
 <213> Homo sapiens

<400> 288
 cggtctgagc tcgagccgaa tcggctcgag gggcagtgga gcacccagca 50
 ggccgccaac atgctctgtc tgtgcctgta cgtgccggtc atcggggaag 100
 cccagaccga gttccagtac tttagtcga aggggctccc tgcgagctg 150
 aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200
 ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250
 atgggcagct agactttgaa gaattgtcc attatctcca agatcatgag 300
 aagaagctga ggctggtgtt taagatttg gacaaaaaga atgatggacg 350
 cattgacgcg caggagatca tgcagtcctt cggggacttg ggagtcaaga 400
 tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaaacggc 450
 acgatgacca togactggaa cgagtggaga gactaccacc tcctccacc 500
 cgtggaaaac atccccgaga tcctcctcta ctggaagcat tccacgatct 550
 ttgatgtggg tgagaatcta acggtcccgg atgagttcac agtggaggag 600
 aggcagacgg ggaatgtggt gagacacctg gtggcaggag gtggggcagg 650
 ggccgtatcc agaacctgca cgccccctt ggacaggctc aaggtgtcca 700
 tgcaggtcca tgcctccgcg agcaacaaca tgggcatcgt tgggtggcttc 750

actcagatga ttcgagaagg aggggccagg tcaactctggc ggggcaatgg 800
 catcaacgtc ctcaaaattg ccccggaatc agccatcaaa ttcattggcct 850
 atgagcagat caagcgccctt gttggtagt accaggagac tctgaggatt 900
 caagagaggc ttgtggcagg gtccttggca ggggccatcg cccagagcag 950
 catctaccca atggaggtcc tgaagaccg gatggcgctg cggagaagacag 1000
 gccagtactc aggaatgctg gactgogcca ggaggatcct ggcagagagag 1050
 ggggtggccg ccttctacaa aggctatgtc cccaacatcg tgggcatcat 1100
 cccctatgcc ggcacgacc ttgcagtcta cgagacgctc aagaatgcct 1150
 ggctgcagca ctatgcagtg aacagcgogg accccggcgt gtttgtgctc 1200
 ctggcctgtg gcacatgtc cagtacctgt ggccagctgg ccagctaccc 1250
 cctggcccta gtcaggacc ggatgcaggc gcaagcctct attgagggcg 1300
 ctccggaggt gaccatgagc agcctcttca aacatctct cgggaccgag 1350
 ggggccttgg ggctgtacag ggggctggcc cccaacttca tgaaggtcat 1400
 ccagctgtg agcatcagct acgtggtcta cgagaacctg aagatcccc 1450
 tgggctgtca gtcgcgggtga cggggggagg gccgcccgcc agtggaactcg 1500
 ctgatcctgg gccgcagcct ggggtgtgca gccatctcat tctgtgaatg 1550
 tgccaacact aagctgtctc gagccaagct gtgaaaacc tagacgcacc 1600
 cgaggaggag gtggggagag ctggcaggcc cagggcttgt cctgctgacc 1650
 ccagcagacc ctctgttgg ttccagcgaa gaccacaggc attccttagg 1700
 gtccagggtc agcaggctcc gggctccat gtgtaaggac aggacatttt 1750
 ctgcagtgcc tgccaatagt gagcttggag cctggaggcc ggcttagttc 1800
 ttccatttca ccttgcagc cagctgttgg ccaaggcccc tgccctctgg 1850
 tetgcctgca atctccctgt gccctcttgc tgccctgctg tctgctgagg 1900
 taaggtggga ggagggtac agcccacatc cccccccctc gtcacatccc 1950
 ataatccatg atgaaagggt aggtcacgtg gccctccagg cctgaattcc 2000
 caacctacag cattgacgcc aacttggctg tgaagggaaga ggaaggatc 2050
 tggccttgtg gtcactggca tctgagccct gctgatggct ggggctctcg 2100
 ggcatgcttg ggagtgcagg gggctcgggc tgccctggcct ggctgcacag 2150
 aaggcaagtg ctggggctca tgggtgctctg agctggcctg gacccgtca 2200
 ggatggggcc caacctcaga ccaaaactcac tgtcccact gtggcatgag 2250
 ggcagtggag caccatgtt gagggcgaag ggcagagcgt ttgtgtgttc 2300
 tggggaggga aggaaaagg gttggaggcc ttaattatg actgttggga 2350

aaagggtttt gtccagaagg acaagccgga caaatgagcg acttctgtgc 2400
 ttccagagga agacgagggga gcaggagctt ggctgactgc tcagagtctg 2450
 ttctgacgcc ctggggggttc ctgtccaacc ccagcagggg cgcagcggga 2500
 ccagcccccac attccacttg tgctactgct tggaaacctat ttattttgta 2550
 tttatttgaa cagagttatg tcttaactat ttttatagat ttgtttaatt 2600
 aatagcttgt cattttcaag ttcatTTTTT attcatattt atgttcatgg 2650
 ttgattgtac ctcccccaag ccgcccagtg ggatggggagg aggaggagaa 2700
 ggggggcoctt ggcccgctgc agtcacatct gtccagagaa attccttttg 2750
 ggactggagg cagaaaagcg gccagaagcg agcagccctg gtccttttcc 2800
 ttggcgaggt tggggaaggg cttgccccca gccttaggat ttcagggttt 2850
 gactgggggc gtggagagag agggaggaac ctcaataacc ttgaagggtg 2900
 aatccagtta tttcctgcgc tgcgagggtt tctttatttc actcctttct 2950
 gaatgtcaag gcagtgaggt gcctctcact gtgaatttgt ggtgggcggg 3000
 ggctggagga gagggtgggg ggctggctcc gtccctocca gccttctgct 3050
 gcccttgctt aacaatgccg gccaaactgc gacctcacgg ttgcacttcc 3100
 attccaccag aatgacctga tgaggaaatc ttcaatagga tgcaaaagatc 3150
 aatgcaaaaa ttgttatata tgaacatata actggagtcg tcaaaaagca 3200
 aattaagaaa gaattggacg ttagaagttg tcatttaaag cagccttcta 3250
 ataaagttgt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
 1 5 10 15
 Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp Lys Lys Asn	Asp Gly Arg Ile Asp	Ala Gln Glu Ile Met	Gln
95	100		105
Ser Leu Arg Asp	Leu Gly Val Lys Ile	Ser Glu Gln Gln Ala	Glu
110	115		120
Lys Ile Leu Lys	Ser Met Asp Lys Asn	Gly Thr Met Thr Ile	Asp
125	130		135
Trp Asn Glu Trp	Arg Asp Tyr His Leu	Leu His Pro Val Glu	Asn
140	145		150
Ile Pro Glu Ile	Ile Leu Tyr Trp Lys	His Ser Thr Ile Phe	Asp
155	160		165
Val Gly Glu Asn	Leu Thr Val Pro Asp	Glu Phe Thr Val Glu	Glu
170	175		180
Arg Gln Thr Gly	Met Trp Trp Arg His	Leu Val Ala Gly Gly	Gly
185	190		195
Ala Gly Ala Val	Ser Arg Thr Cys Thr	Ala Pro Leu Asp Arg	Leu
200	205		210
Lys Val Leu Met	Gln Val His Ala Ser	Arg Ser Asn Asn Met	Gly
215	220		225
Ile Val Gly Gly	Phe Thr Gln Met Ile	Arg Glu Gly Gly Ala	Arg
230	235		240
Ser Leu Trp Arg	Gly Asn Gly Ile Asn	Val Leu Lys Ile Ala	Pro
245	250		255
Glu Ser Ala Ile	Lys Phe Met Ala Tyr	Glu Gln Ile Lys Arg	Leu
260	265		270
Val Gly Ser Asp	Gln Glu Thr Leu Arg	Ile His Glu Arg Leu	Val
275	280		285
Ala Gly Ser Leu	Ala Gly Ala Ile Ala	Gln Ser Ser Ile Tyr	Pro
290	295		300
Met Glu Val Leu	Lys Thr Arg Met Ala	Leu Arg Lys Thr Gly	Gln
305	310		315
Tyr Ser Gly Met	Leu Asp Cys Ala Arg	Arg Ile Leu Ala Arg	Glu
320	325		330
Gly Val Ala Ala	Phe Tyr Lys Gly Tyr	Val Pro Asn Met Leu	Gly
335	340		345
Ile Ile Pro Tyr	Ala Gly Ile Asp Leu	Ala Val Tyr Glu Thr	Leu
350	355		360
Lys Asn Ala Trp	Leu Gln His Tyr Ala	Val Asn Ser Ala Asp	Pro
365	370		375
Gly Val Phe Val	Leu Leu Ala Cys Gly	Thr Met Ser Ser Thr	Cys
380	385		390
Gly Gln Leu Ala	Ser Tyr Pro Leu Ala	Leu Val Arg Thr Arg	Met
395	400		405

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
				425					430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
				440					445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
				455					460					465

Val Gln Ser Arg

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
 ggaaggcagc ggcagctcca ctccagccagt acccagatac gctgggaacc 50
 ttccccagcc atggcttccc tggggcagat cctcttctgg agcataatta 100
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150
 atttcagga gacactccat cacagtcact actgtcgcct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
 tttctgatat cgtgatacaa tggctgaagg aaggtgtttt aggcttggtc 300
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggcccg acagcagtggt ttgctgatca agtgatagtt ggcaatgcct 400
 ctttgcggct gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450
 tatatcatca ctctaaagg caaggggaat gctaaccttg agtataaaac 500
 tggagccttc agcatgccgg aagtgaatgt ggactataat gccagctcag 550
 agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtggtc 600
 tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650
 cagcttttag ctgaactctg agaatgtgac catgaaggtt gtgtctgtgc 700
 tctacaatgt tacgatcaac aacacatact cctgtatgat tgaataatgc 750
 attgccaaag caacagggga tatcaaagt acagaatcgg agatcaaaaag 800
 gcggagtcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850
 ctttctttgc catcagctgg gcaacttctg ctctcagccc ttacctgatg 900
 ctaaaaataat gtgccttggc caaaaaaaag catgcaaagt cattgttaca 950
 acagggatct acagaactat ttaccacca gatatgacct agttttatat 1000
 ttctgggagg aatatgaattc atatctagaa gtctggagtg agcaacaacg 1050

agcaagaaac aaaaagaagc caaaagcaga aggctccaat atgaacaaga 1100
 taaatctatc ttcaagaca tattagaagt tgggaaaata attcatgtga 1150
 actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200
 gcatcccccag atctcaggga cctccccctg cctgtcacct ggggagtga 1250
 aggacaggat agtgcattgt ctttgtctct gaatttttag ttatatgtgc 1300
 tgtaatgttg ctctgaggaa gcccttgaa agtctatccc aacatatcca 1350
 catcttatat tccacaaatt aagctgtagt atgtacccta agacgtgtgt 1400
 aattgactgc cacttcgcaa ctccagggcg gctgcatttt agtaatgggt 1450
 caaatgattc actttttatg atgcttccaa aggtgccttg gcttctcttc 1500
 ccaactgaca aatgccaaag ttgagaaaaa tgatcataat tttagcataa 1550
 acagagcagt cggggacacc gattttataa ataaactgag caccttcttt 1600
 ttaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaa 1658

<210> 291
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 291
 Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile
 1 5 10 15
 Ile Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly
 20 25 30
 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

155	160	165
Leu Arg Cys Glu Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val Val	
170	175	180
Trp Ala Ser Gln Val Asp Gln Gly Ala	Asn Phe Ser Glu Val Ser	
185	190	195
Asn Thr Ser Phe Glu Leu Asn Ser Glu	Asn Val Thr Met Lys Val	
200	205	210
Val Ser Val Leu Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser Cys	
215	220	225
Met Ile Glu Asn Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys Val	
230	235	240
Thr Glu Ser Glu Ile Lys Arg Arg Ser	His Leu Gln Leu Leu Asn	
245	250	255
Ser Lys Ala Ser Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser Trp	
260	265	270
Ala Leu Leu Pro Leu Ser Pro Tyr Leu	Met Leu Lys	
275	280	

<210> 292
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 292
 gaattgttag aagacagcgg cggtgccatg gcggcgctctc tggggcaggt 50
 gttggctctg gtgctggtgg ccgctctgtg ggggtggcaag cagccgctgc 100
 tgaagcgggc ctccgcgggc ctgcagcggg ttcattgagcc gacctgggcc 150
 cagcagttgc tacaggagat gaagaccctc ttcttgaata ctgagtacct 200
 gatgcccttt ctcccaacc agtgtggatc ccttctctat tacctcacct 250
 tggcatcgac agatctgacc ctggctgtgc ccattctgtaa ctctctgggt 300
 atcatcttca cactgattgt tgggaaggcc cttggagaag atattgtgtg 350
 aaaacgtaag ttagactact gcgagtgcgg gacgcagctc tgtggatctc 400
 gacataacctg tgttagttcc ttcccagaac ccattctccc agagtgggtg 450
 aggacacggc cttttcccat cctgcccttt cctctgcagc tgttttgctt 500
 ccttggtgcc atcagagttc ccttcccctg gacagtctgg agaagacag 550
 aggctgggggt ttgggattga agaccagacc ccattctgagc ccttctccca 600
 gccctgtacc agctcctact ggcattggtg agctcagacc ctccgtgatt 650
 ctgcctatta tccaggagc agttgctggc atggtgctca ccgtgatagg 700
 aatttcactc tgcatcaca gctcagttag taagaccagc gggcaacagt 750
 ctaccctttg agtgggccga acccaactcc agctctgctg cctccaggaa 800

gccctgggc catgaagtgc tggcagtgc cggatggacc tagcacttcc 850
 cctctctggc cttagcttcc tctctcttta tggggataac agctacctca 900
 tggatcacaa taagagaaca agagtgaag agttttgtaa ccttcaagt 950
 ctgttcagct gcggggattt agcacaggag actctacgct caccctcagc 1000
 aaactttctg cccacgagc tctcttctg ctaacatctc aggcctccag 1050
 cccagccacc attactgtgg cctgatctgg actatcatgg tggcagggtc 1100
 catggactgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggctctggg actcagtcag agcgcttttg 1200
 ctgaatgagg ggtggaaccg agggaagaag gtgcgtcgga gtggcagatg 1250
 caggaaatga gctgtctatt agccttgct gcccccacca tgaggtagcg 1300
 agaaatcttc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgactccagc acacctggcg agtagtagct gtcaataaat 1400
 ctatgtaac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
 Met Ala Ala Ser Leu Gly Gln Val Leu Ala Leu Val Leu Val Ala
 1 5 10 15
 Ala Leu Trp Gly Gly Thr Gln Pro Leu Leu Lys Arg Ala Ser Ala
 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

ctctctgtagg acagtcacca gccagatcc agaagcctct ctaggctcca 50
gctttctctg tggaagatga cagcaattat agcaggaccc tgccaggctg 100
tcgaaaagat tccgcaataa aactttgcc a gtgggaagta cctagtga 150
cggcctaaga tgccacttct tctcatgtcc caggcttgag gcctgtggt 200
cccatcctt gggagaagtc agctccagca ccatgaaggg catcctcgtt 250
gctggtatca ctgcagtgtc tgttcagct gtagaatctc tgagctgcgt 300
gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
ctgcagtgag gagacacaca ttacagcctt cactgtccac gtgtctgctg 500
aagaacactt tcattttgta agccagtgtc gccaaaggaa ggaatgcagc 550
aacaccagcg atgccctgga cctcccctg aagaacgtgt ccagcaacgc 600
agagtgcctt gcttgttatg aatctaattg aacttctgt cgtgggaagc 650
cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
aagaatgaca ttgagtctaa gagtctcgtg ctgaaaggct gttccaacgt 750
cagtaacgcc acctgtcagt tctgtctggt tgaaaacaag actccttgag 800
gagtcatctt tcgaaagtgt gagtgtgcaa atgtaaacag cttaaccccc 850
acgtctgcac caaccacttc ccacaacgtg ggctccaaag cttccctcta 900
cctcttgccc ctggccagcc tcttctctcg gggactgctg ccttgaggct 950
ctggggctgc actttgccca gcacccatt tctgcttctc tgaggctocag 1000
agcaccacct gcggtgtgta caccctcttt ccctgctctg ccccgtttaa 1050
ctgccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
ttgttcttca ttattaaagc actggttoat tcaactgccaa aaaaaaaaaa 1150
aaaaaaaaaa aaaa 1164

<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

Met Lys Gly Ile Leu Val Ala Gly Ile Thr Ala Val Leu Val Ala
1 5 10 15
Ala Val Glu Ser Leu Ser Cys Val Gln Cys Asn Ser Trp Glu Lys
20 25 30
Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn
35 40 45
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
50 55 60
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser
65 70 75
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu
80 85 90
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys
95 100 105
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser
110 115 120
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser
125 130 135
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val
140 145 150
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu
155 160 165
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe
170 175 180
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys
185 190 195
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro
200 205 210
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu
215 220 225
Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

ggcctcggtt caaacgacc ggtgggtcta cagcggaagg gagggagcga 50
aggtaggagg cagggttgc ctcaactggcc accctcccaa cccaagagc 100
ccagcccat ggtcccgcc gcggcgcg tgctgtgggt cctgtgtgtg 150

aatctgggtc cccgggcggc gggggcccaa ggcctgaccc agactccgac 200
cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgagct 250
accggagcac cgcccgact ggtcttcccc ggaagacaag gataatccta 300
gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350
ggctgccgag ctcttgccg ccacgggtgc caccggcttt agccggtcgt 400
ccgccattaa cgaggaggat gggctctcag aagagggggt tgtgattaat 450
gccggaagg atagcaccag cagagagctt cccagtgcga ctcccaatac 500
agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550
tcaggctgac ttcaagcctg ccgcgctccc ccgggaggtc tactgaggac 600
ctgccaggct cgcaggccac cctgagccag tgggtccacac ctgggtctac 650
cccgagccgg tggcgtcac cctcaccac agccatgcca tctcctgagg 700
atctgcggct ggtgctgatg ccctggggcc cgtggcactg ccactgcaag 750
tcgggaccca tgagccggag ccggtctggg aagctgcacg gcctttccgg 800
gcgccttcga gttggggcgc tgagccagct ccgcacggag cacaagcctt 850
gcacctatca acaatgtccc tgcaaccgac ttcgggaaga gtgccccctg 900
gacacaagtc tctgtactga caccactgt gcccttcaga gcaccaccag 950
taccaggacc accactaccc ccttccccc catccaccto agaagcagtc 1000
ccagcctgcc acccgccagc cctgcccag cctggcttt ttggaaacgg 1050
gtcaggattg gctgggagga tatttgaat agcctctctt cagtgttcac 1100
agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
atgaggagat gtcagtatct caacctctct tgccctttca atcctagcac 1200
ccactagata ttttagtac agaaaaacaa aactggaaaa cacia 1245

<210> 297
<211> 341
<212> PRT
<213> Homo sapiens

<400> 297
Met Val Pro Ala Ala Gly Ala Leu Leu Trp Val Leu Leu Leu Asn
1 5 10 15
Leu Gly Pro Arg Ala Ala Gly Ala Gln Gly Leu Thr Gln Thr Pro
20 25 30
Thr Glu Met Gln Arg Val Ser Leu Arg Phe Gly Gly Pro Met Thr
35 40 45
Arg Ser Tyr Arg Ser Thr Ala Arg Thr Gly Leu Pro Arg Lys Thr
50 55 60
Arg Ile Ile Leu Glu Asp Glu Asn Asp Ala Met Ala Asp Ala Asp

65					70					75				
Arg	Leu	Ala	Gly	Pro	Ala	Ala	Ala	Glu	Leu	Leu	Ala	Ala	Thr	Val
				80					85					90
Ser	Thr	Gly	Phe	Ser	Arg	Ser	Ser	Ala	Ile	Asn	Glu	Glu	Asp	Gly
				95					100					105
Ser	Ser	Glu	Glu	Gly	Val	Val	Ile	Asn	Ala	Gly	Lys	Asp	Ser	Thr
				110					115					120
Ser	Arg	Glu	Leu	Pro	Ser	Ala	Thr	Pro	Asn	Thr	Ala	Gly	Ser	Ser
				125					130					135
Ser	Thr	Arg	Phe	Ile	Ala	Asn	Ser	Gln	Glu	Pro	Glu	Ile	Arg	Leu
				140					145					150
Thr	Ser	Ser	Leu	Pro	Arg	Ser	Pro	Gly	Arg	Ser	Thr	Glu	Asp	Leu
				155					160					165
Pro	Gly	Ser	Gln	Ala	Thr	Leu	Ser	Gln	Trp	Ser	Thr	Pro	Gly	Ser
				170					175					180
Thr	Pro	Ser	Arg	Trp	Pro	Ser	Pro	Ser	Pro	Thr	Ala	Met	Pro	Ser
				185					190					195
Pro	Glu	Asp	Leu	Arg	Leu	Val	Leu	Met	Pro	Trp	Gly	Pro	Trp	His
				200					205					210
Cys	His	Cys	Lys	Ser	Gly	Thr	Met	Ser	Arg	Ser	Arg	Ser	Gly	Lys
				215					220					225
Leu	His	Gly	Leu	Ser	Gly	Arg	Leu	Arg	Val	Gly	Ala	Leu	Ser	Gln
				230					235					240
Leu	Arg	Thr	Glu	His	Lys	Pro	Cys	Thr	Tyr	Gln	Gln	Cys	Pro	Cys
				245					250					255
Asn	Arg	Leu	Arg	Glu	Glu	Cys	Pro	Leu	Asp	Thr	Ser	Leu	Cys	Thr
				260					265					270
Asp	Thr	Asn	Cys	Ala	Ser	Gln	Ser	Thr	Thr	Ser	Thr	Arg	Thr	Thr
				275					280					285
Thr	Thr	Pro	Phe	Pro	Thr	Ile	His	Leu	Arg	Ser	Ser	Pro	Ser	Leu
				290					295					300
Pro	Pro	Ala	Ser	Pro	Cys	Pro	Ala	Leu	Ala	Phe	Trp	Lys	Arg	Val
				305					310					315
Arg	Ile	Gly	Leu	Glu	Asp	Ile	Trp	Asn	Ser	Leu	Ser	Ser	Val	Phe
				320					325					330
Thr	Glu	Met	Gln	Pro	Ile	Asp	Arg	Asn	Gln	Arg				
				335					340					

<210> 298
 <211> 2692
 <212> DNA
 <213> Homo sapiens

<400> 298
 cccgggtcga cccacgcgtc cggggagaaa ggaatggccgg cctggcggcg 50

cggttggtcc tgctagctgg ggcagcggcg ctggcgagcg gctcccagg 100
 cgacctgtag ccggtgtacc gcgactgcgt actgcagtgc gaagagcaga 150
 actgtctctgg gggcgctctg aatcacttcc gctcccgcca gccaatctac 200
 atgagtctag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250
 gtgggtcacc gttgggctct acctccagga aggtcacaaa gtgcctcagt 300
 tccatggcaa gtggcccttc tcccggttcc tgttctttca agagccggca 350
 tcggccgtgg cctcgtttct caatggcctg gccagcctgg tgatgctctg 400
 ccgctaccgc acctctgtgc cagcctcctc ccccatgtac cacacctgtg 450
 tggccttcgc ctgggtgtcc ctcaatgcat ggttctggtc cacagtcttc 500
 cacaccaggg acactgacct cacagagaaa atggactact tctgtgcctc 550
 cactgtcctc ctacactcaa tctacctgtg ctgcgtcagg accgtggggc 600
 tgcagcaccg agctgtgtgc agtgccctcc gggctctcct gctgctcatg 650
 ctgacctgac acgtctccta cctgagcctc atccgcttcg actatggcta 700
 caacctgggt gccaacgtgg ctattggcct ggccaacgtg gtgtgtgtgg 750
 tggcctgggt cctgtggaac cagcggcggc tgcctcacgt gcgcaagtgc 800
 gtggtgtgtg tcttctgtct gcaggggctg tccctgtctg agctgttga 850
 ctctccaccg ctcttctggg tcttgatgc ccatgccato tggcacatca 900
 gcaccatccc tgtccacgtc ctctttttca gctttctgga agatgacagc 950
 ctgtacctgc tgaagggaac agaggacaag ttcaagctgg actgaagacc 1000
 ttggagcgag ctgccccag tggggatcct gcccccgcct tgcctggcctc 1050
 ccttctcccc tcaacccttg agatgatttt ctcttttcaa ctctctgaac 1100
 ttggacatga aggatgtggg ccagaatca tgtggccagc ccacccctctg 1150
 ttggccctca ccagccttg agtctgttct agggaaaggc tccagcatc 1200
 tgggactcga gagtgggag cccctctacc tccctggagct gaactggggt 1250
 ggaactgagt gtgttcttag ctctaccggg aggcagctg cctgtttcct 1300
 cccaccagc ctctcccca catccccagc tgcctggctg ggtcctgaag 1350
 ccctctgtct acctgggaga ccagggacca caggccttag ggatacagg 1400
 ggtcccttc tgttaccacc cccaccctc ctccaggaca ccaactagg 1450
 gtgctggatg ctgttcttt ggccagcaa ggctcaccgc gattctcccc 1500
 atgggatctt gagggaccaa gctgctggga ttgggaagga gtttaccct 1550
 gaccgttgcc ctaggcagg tcccaggag cctcaccata ctccctttca 1600
 gggccagggc tccagcaag ccagggaag gatcctgtgc tgctgtctgg 1650

ttgagagcct gccaccgtgt gtcgggagtg tgggccaggc tgagtgcata 1700
 ggtgacaggg ccgtgagcat gggcctgggt gtgtgtgagc tcaggcctag 1750
 gtgcgcagtg tggagacggg tgtgtcggg gaagaggtgt ggcttcaaag 1800
 tgtgtgtgtg caggggggtg gtgtgttagc gtgggttagg ggaacgtgtg 1850
 tgcgcgtgct ggtgggcatg tgagatgagt gactgccgtg gaatgtgtcc 1900
 acagttgaga ggttgagca ggaatgagga atcctgtcac catcaataat 1950
 cacttgtgga gcgccagctc tgcccaagac gccacctggg cggacagcca 2000
 ggagctctcc atggccaggc tgctgtgtg catgttccct gtctggtgoc 2050
 cctttgccg cctcctgcaa acctcacagg gtcoccacac aacagtgcc 2100
 tccagaagca gccctcggg ggcagaggaa ggaaatggg gatggctggg 2150
 gctctctcca tctcctttt ctccttgctc tgcctgggtg ggcttcccc 2200
 tccaaaacct ccattccct gctgccagcc cctttgccat agcctgattt 2250
 tggggaggag gaagggcgga tttgaggag aaggggagaa agcttatggc 2300
 tgggtctggt ttcttccct cccagagggt cttactgttc cagggtggcc 2350
 ccagggcagg caggggccac actatgcctg tgccctggta aaggtgacc 2400
 ctgccattta ccagcagccc tggcatgttc ctgcccaca ggaatagaat 2450
 ggaggagact ccagaaact tccatcccaa aggcagtctc cgtggttgaa 2500
 gcagactgga tttttgctc gccctgacc cctgtccct cttgaggga 2550
 ggggagctat gctaggactc caacctcagg gactcgggtg gctgcgcta 2600
 gcttctttt atactgaaaa cttttaaggt gggagggttg caaggatgt 2650
 gcttaataaa tcaattccaa gctcaaaaa aaaaaaaaa aa 2692

<210> 299
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
 Met Ala Gly Leu Ala Ala Arg Leu Val Leu Leu Ala Gly Ala Ala
 1 5 10 15
 Ala Leu Ala Ser Gly Ser Gln Gly Asp Arg Glu Pro Val Tyr Arg
 20 25 30
 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70

Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	80	85	90
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	95	100	105
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	110	115	120
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	125	130	135
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	140	145	150
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	155	160	165
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	170	175	180
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	185	190	195
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	200	205	210
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	215	220	225
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	230	235	240
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	245	250	255
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	260	265	270
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	275	280	285
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	290	295	300
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	305	310	315
Lys	Phe	Lys	Leu	Asp											320		

<210> 300
 <211> 1674
 <212> DNA
 <213> Homo sapiens

<400> 300
 ggccgcctgg aattgtggga gttgtgtctg ccactcggct gccggaggcc 50
 gaaggtccgt gactatggct cccagagcc tgccttcacg taggatggct 100
 cctctgggca tgctgcttgg getgctgatg gccgcctgct tcacctctg 150

cctcagtcac cagaacctga aggagtttgc cctgaccaac ccagagaaga 200
 gcagcaccac agaaacggag agaaaagaaa ccaaagccga ggaggagctg 250
 gatgccgaag tcctggagggt gttccaccgc acgcatgagt ggcaggccct 300
 tcagccaggg caggctgtcc ctgcaggatc ccacgtacgg ctgaatcttc 350
 agactgggga aagagaggca aaactccaat atgaggacaa gttccgaaat 400
 aatttgaaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
 ggatctcaag agtgactctg caaaattcaa ggagggggca gagatggaga 500
 gttcaaagga agacaaggca aggcaggctg aggtaaagcg gctcttcgcg 550
 cccattgagg aactgaagaa agactttgat gagctgaatg ttgtcattga 600
 gactgacatg cagatcatgg tacggctgat caacaagtgc aatagtcca 650
 gctccagttt ggaagagaag attgctgcgc tctttgatct tgaatattat 700
 gtccatcaga tggacaatgc gcaggacctg ctttctcttg gtggtcttc 750
 agtggtgatc aatgggctga acagcacaga gccctctctg aaggagtatg 800
 ctgcgtttgt gctgggcgct gccttttcca gcaaccccaa ggtccagggtg 850
 gagggcatcg aagggggagc cctgcagaag ctgctgggtc tccctggccac 900
 ggagcagccg ctcaactgca agaagaaggt cctgtttgca ctgtgtcccc 950
 tgctgcgcca ctccccctat gccagcggc agttcttgaa gctcgggggg 1000
 ctgcaggctc tgaggaccct ggtgcaggag aagggcacgg aggtgctcgc 1050
 cgtgcgctg gtccactgc tctacgacct ggtcacggag aagatgttgc 1100
 ccgaggagga ggctgagctg acccaggaga tgtcccaga gaagctgcag 1150
 cagtatgcc aggtacacct cctgccaggc ctgtgggaac agggctggtg 1200
 cgagatcacg gcccacctcc tggcgctgcc cgagcatgat gccctgaga 1250
 aggtgctgca gacactgggc gtctctctga ccacctgcgc ggaccgctac 1300
 cgtcaggacc ccagctcgc caggacactg gccagcctgc aggtgctgta 1350
 ccaggctgct gccagcctgg agctgcagga tggtagggac gagggctact 1400
 tccaggagct gctgggctct gtcaacagct tggtagagga gctgagatga 1450
 ggccccacac caggactgga ctgggatgcc gctagtggag ctgaggggtg 1500
 ccagcgtggg tgggcttctc aggcaggagg acatcttggc agtgcgtggc 1550
 tggccattaa atggaaacct gaaggccaaa aaaaaaaaaa aaaaaaaaaa 1600
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
 aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
Met	Leu	Leu	Gly	Leu	Leu	Met	Ala	Ala	Cys	Phe	Thr	Phe	Cys	Leu	20	25	30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly	Thr Glu Val Leu Ala Val	
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met Phe	
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu Lys	
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu	Leu Pro Gly Leu Trp Glu	
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His	Leu Leu Ala Leu Pro Glu	
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln	Thr Leu Gly Val Leu Leu	
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly Arg	
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser Leu	
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu Leu	
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu	Leu Arg	
455	460	

<210> 302

<211> 2136

<212> DNA

<213> Homo sapiens

<400> 302

```

ttcggcttcc gtagaggaag tggcgcggac cttcatttgg ggtttcgggt 50
cccccccttc cccctccccg gggctctgggg gtgacattgc acgcgcgcc 100
tcgtggggtc gcgttgccac cccacgcgga ctcgccagct ggcgcgcgcc 150
tcccatttgc ctgtctcgtt caggccccca ccccccttcc cacctgacca 200
gccatggggg ctgcggtgtt tttcggctgc actttcgtcg cgttcggccc 250
ggccttcgcg cttttcttga tcaactgtgc tggggaccgc cttcgcgtta 300
tcatcctggt cgcaggggca tttttctggc tgggtctccct gctcctggcc 350
tctgtgtctt ggttcatctt ggtccatgtg accgaccggt cagatgcccg 400
gtccagtagc ggccctcctg tttttggtgc tgctgtctct gtcctctcac 450
aggaggtgtt ccgctttgcc tactacaagc tgcttaagaa ggcagatgaa 500
gggtagcatc cgctgagtga ggacggaaga tcacccatct ccattcgcca 550

```

gatggcctat gtttctgggc tctccttcgg tatcatcagt ggtgtcttct 600
ctgttatcaa tattttggct gatgcacttg ggcaggtgt ggttgggac 650
catggagact caccctatta cttcctgact tcagccttct tgacagcagc 700
cattatcctg ctccatacct tttggggagt tgtgttcttt gatgcctgtg 750
agaggagacg gtaactgggt ttgggccttg tggttgggag tcacctactg 800
acatcgggac tgacattcct gaacccttg tatgaggcca gcctgctgcc 850
catctatgca gtcactgttt ccattggggt ctgggccttc atcacagctg 900
gaggttcctt ccgaagtatt cagcgcagcc tcttgtgtaa ggactgacta 950
cctggactga tcgcctgaca gatccacct gcctgtccac tgcccactac 1000
tgagcccagc cccagcccg gtccattgcc cacattctct gtctccttct 1050
cgtcgggtcta cccactacc tccaggtttt tgccttgtcc ttttgtgacc 1100
gttagtctct aagctttacc aggagcagcc tgggttcagc cagtcagtga 1150
ctgggtgggt tgaatctgca cttatcccca ccacctggg accccttgt 1200
tgtgtocagg actccctctg tgtcagtgt ctgctctcac cctgccaaag 1250
actcacctcc cttccctct ctgagccgac ggcaggagga cagtccgggtg 1300
atggtgtatt ctgcctctgc catccaccc gaggactgag ggaacctagg 1350
ggggaccctt gggcctggg tgccctcctg atgtcctcgc cctgtatttc 1400
tccatctcca gttctggaca gtgcaggttg ccaagaaaag ggaacctagt 1450
tagccattgc cctggagatg aaattaatgg aggtcaagg atagatgagc 1500
cttgagtttc tcagtactcc ctcaagactg gacatcttgg tcttttctc 1550
aggcctgagg gggaaccatt tttggtgtga taaatccct aaactgcctt 1600
ttttctttt ttgaggtggg gggaggagg aggtatatgt gaactcttct 1650
aacctccttg ggctatattt tctctcctcg agttgctct catggctggg 1700
ctcattctcg tccctttctc cttggtccca gacctgggg gaaaggaaag 1750
aagtgcattg ttgggaactg gcattacttg aactaatggt ttaacctcc 1800
ttaaccacca gcacccctcc tctcccaag gtgaagtgga ggtgtctgtg 1850
gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900
atgacatcgt agggaaggag gggagatttt tttgtagttt ttaattgggg 1950
tgtgggaggg gcggggagggt tttctataaa ctgtatcatt tctgtctgag 2000
ggtggagtgt cccatccttt taatcaagggt gattgtgatt ttgactaata 2050
aaaaagaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303
 Met Gly Ala Ala Val Phe Phe Gly Cys Thr Phe Val Ala Phe Gly
 1 5 10 15
 Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu
 20 25 30
 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser
 35 40 45
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr
 50 55 60
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly
 65 70 75
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr
 80 85 90
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser
 95 100 105
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val
 110 115 120
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile
 125 130 135
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His
 140 145 150
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala
 155 160 165
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp
 170 175 180
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly
 185 190 195
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr
 200 205 210
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly
 215 220 225
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln
 230 235 240
 Arg Ser Leu Leu Cys Lys Asp
 245

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
aagctgggtt aaggaagcag aggaggggta gattcgttga gtgaggacgg 50
aagatcaacc catttcatt ccgccagatg gcctatgttt ctggtctctc 100
ccttcggnat catcagtggt gnttntctg ttatcaatat ttggctgat 150
gcanttgggc caggtgtggt tgggatccat ggagactcac cctattantt 200
cctganttca gccttntga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
gaccgaccgt tcagatgcc gggtccagta cggcttcctg atttttggtg 50
ctgctgtntc tgtccttcta caggaggtgt tccgctttgc ctantacaag 100
ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaa 150
atcaccatt tccatccgcc agatggccta tgttntggt ntctcctcg 200
gtatcatcag tgggttttn tctgttatca atattttggn tgatgcantt 250
ggggcaggtg tggttgggat ccatggagan tcacctatt aattcctgaa 300
ttcagccttt ntgcagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt tccccccctt 50
tccctttccc cggggtcttg ggtgacattg cacgggcccc tcgtggggtc 100
gcgttgccac cccacgcgga ctccccagnt gngcgccct tccattttgc 150
ctgtcctggt caggccccca ccccccttcc cacntgacca gccatggggg 200
ctgcggtggt ttctggctgc accttcgtcg cgttcggccc ggccttcgcg 250

tttttcttga tcaactgtggc tggggaccgg cttcgcgtta tcatcctggc 300
 cgagggggca tttttctggc tgggtctccct gctcctggcc tctgttggtc 350
 ggttcattctt ggtccatgtg accgaccggc agatgccc gctccagtac 400
 ggccctcctga tttttggtgc tgctgtctct gtcctctctc aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag ggggttagcat 500
 cgctgagtga ggacggaaga tcacccatct ccatccgcca gatggcctat 550
 gttttcggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggct gatgcacttg ggccaggtgt ggttggggatc catggagact 650
 cacc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
 gtaaaagaaa gtggccggac cttcattggg gtttcgggtc ccccttttc 50
 cnttccccgg ggtctggggg tgacattgca ccgcgccnt cgtggggctg 100
 cgttgccacc ccacgaggac tcccagntg gcgcgccct cccattgcc 150
 tgtcctggtc agggcccccac ccccttccc acctgaccag ccatgggggc 200
 tgcggtgttt ttcgggctgc actttcgtcg cgttcgggcc cgcccttcgc 250
 gcttttcttg atcactgttg ctggggaccc gcttcgcgtt atcactcctg 300
 tcgcaggggc atttttcttg ctggtctccc tgcctcggc ctctgttgct 350
 tggttcatct tggtcattgt gaccgaccgg tcagatgcc ggctccagta 400
 cggcctcctg atttttggtg ctgctgtctc tgccttctc caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggcggaag atcaccatc tccatccgc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600
 atattttggc tgatgcactt gggccaggtg tggttgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
 gccccaggga gcagtgggtg gttataactc aggcccggtg cccagagccc 50

aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggctga 100
 gctgggagca aatccccac cccctacctg ggggacaggg caagtgcagc 150
 ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgcgtcct 200
 gcacccacat ctttctctgt cccctccttg ccctgtcttg aggtgctgat 250
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgcgat 300
 ggtggccogt ccttgtgggt cctctctacc tggggaata aggtgcagcg 350
 gccatggcta cagcaagacc ccctggatg tgggtgctct gtgctctgat 400
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
 tttctgtga ccccccctt aacaccgtgc cctctgggag caaccaggac 500
 ctgggagctg gggccgggga agacgcccgg tcggatgaca gcagcagcg 550
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
 cgctgttctt aaggcccaac cagctctact gcggggcggt gttggtgatc 650
 ccacagtggc tgctcacggc cgccactgc aggaagaaa tttcagagt 700
 ccgtctcggc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750
 tgttccaggg ggtcaaatcc atccccacc ctggctactc ccaccctggc 800
 cactctaagc acctcatgct catcaactg aacagaagaa ttcgtccacc 850
 taaagatgct agaccatca acgtctcttc tcattgtccc tctgctggga 900
 caaagtgcct ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
 ttccctaagg tcctccagtg cttgaatata agcgtgctaa gtcagaaaa 1000
 gtgcgaggat gcttaccoga gacagataga tgacaccatg tctgcgccg 1050
 gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150
 tgcccgggcc aacagaccgg gtgtctacac gaacctctgc aagtccacca 1200
 agtggatcca ggaaccatc caggccaact cctgagtcac ccaggactc 1250
 agcacaccgg catccccacc tgctgcaggg acagccctga cactcctttc 1300
 agaccctcat tcctcccag agatgttgag aatgttcac tcctccagccc 1350
 ctgaccccat gtctcctgga ctcagggtct gcttccccca cattgggctg 1400
 accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450
 gcgggggttg cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500
 ggcccatccc ttctctcgag ctctgacca aatttagtcc cagaaaaaa 1550
 ctgagaagtg gaaaaaaaa 1570

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu	1	5	10	15
Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn	20	25	30	
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly	35	40	45	
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser	50	55	60	
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met	65	70	75	
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln	80	85	90	
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr	95	100	105	
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His	110	115	120	
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln	125	130	135	
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His	140	145	150	
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro	155	160	165	
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser	170	175	180	
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser	185	190	195	
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser	200	205	210	
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile	215	220	225	
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser	230	235	240	
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu	245	250	255	
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn	260	265	270	
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile	275	280	285	
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser											

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtccgatgac agcagcagcc gcacatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
 atgggtcaacg accggtggaa gaccatgggc ggcgtgccc aacttgagga 50
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgctgct ggccttggt gtgctgctg ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgcc ggcacggcgc cccacactgt 200
 cgtcagcact ggggctgcc ggcgaacag cgccctggtc actgtggaaa 250
 gggcgagacag ctgcacctc agcatcctca ttgaccgcg ctgccccgac 300
 ctacccgaca gcttcgcacg cctggagagc gccaggcct cggtgtgca 350
 ggcgtgaca gaggaccagg cccagccacg gctggtgggc gaccaggagc 400
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggccgca 450
 gcctcagagc tgcagacgga gtgcattggg ctgcggaagg ggcatggcac 500
 gctgggcccag ggcctcagcg cctgcagag tgagcagggc cgcccatcc 550

agcttctctc tgagagccag ggccacatgg ctcacctggt gaactccgtc 600
 agcgacatcc tggatgcctt gcagaggggac cgggggctgg gccggccccc 650
 caacaaggcc gaccttcaga gagcgccctgc cgggggaacc cggcccccgg 700
 gctgtgccac tggtcccccg ccccagagact gtctggacgt cctctaagc 750
 ggacagcagg acgatggcgt ctactctgtc ttcccccac actaccocgg 800
 cggcttcacg gtgtactgtg acatgcgcac ggacggcgcc ggctggacgg 850
 tgtttcagcg ccgggaggac ggctccgtga actctctccg gggctgggac 900
 gcgtaccagc acggctttgg caggctcacc ggggagcact ggctagggct 950
 caagaggatc cacgccctga ccacacaggc tgccctacgag ctgcacgtgg 1000
 acctggagga ctttgagaat ggcacggcct atgcccgcta cgggagcttc 1050
 ggcgtgggct tgttctcgtt ggaccctgag gaagacgggt acccgctcac 1100
 cgtggctgac tattccggca ctgcaggcga ctccctcctg aagcacagcg 1150
 gcatgaggtt caccaccaag gaccgtgaca gcgaccatto agagaacaac 1200
 tgtccgcctt tctaccgcgg tgcctggtgg taccgcaact gccacacgtc 1250
 caacctcaat gggcagtacc tgcgcggtgc gcacgcctcc tatgccagcg 1300
 gcgtggagtg gtccctcctg accggctggc agtactcact caagtctctt 1350
 gagatgaaga tccggccggt ccgggaggac cgctagactg gtgcaccttg 1400
 tccttgccc tgcgtgtccc tgtcgcccca tcccgcacc caocteact 1450
 tttcgtgaat gttctccacc cacctgtgcc tggcggaccc actctccagt 1500
 agggaggggc cgggccatcc ctgacacgaa gtcctctggg ccggtgaagt 1550
 cacacatcgc cttctcgccc tccccacccc ctccatttgg cagctcactg 1600
 atctcttgcc tctgctgatg ggggctggca aacttgacga ccccaactcc 1650
 tgctgcctcc cactgtgact ccggtgctgt ttgcctccc ctggccagga 1700
 tgggtggatc tgccccaggc acctctgcc ctgcccgccc aaatacccg 1750
 cattatggg acagagagca gggggcagac agcacccctg gagtctcct 1800
 agcagatcgt ggggaatgtc aggtctctct gaggtcaggt ctgaggccag 1850
 tatctccag cctcccaat gccaaacccc accccgttcc cctgggtccc 1900
 agagaacca cctctcccc aagggcctca gcctggctgt gggctgggtg 1950
 gcccacatct accaggccct gaggtcagga tggggagctg ctgccttttg 2000
 ggaccacgc tccaaggctg agaccagttc cctggaggcc acccaccctg 2050
 tgccccgcca ggccctgggt ctgcagtcct cttacctgct gtgccacct 2100
 gctctctgtc tcaaatgagg ccaaacccat ccccaccca gctcccgccc 2150

gtcctcctac ctggggcagc cggggctgcc atcccatttc tctgcctct 2200
 ggaaggtggg tggggccctg caccgtgggg ctggactgcg ctaatgggaa 2250
 gctcttggtt ttctgggctg gggcctaggg agggctggga tgaggcttgt 2300
 acaaccccca ccaccaattt cccagggact ccagggtcct gaggcctccc 2350
 aggagggcct tgggggtgat gacccttcc ctgaggtggc tgtctccatg 2400
 aggaggccaa cccttgccat tgaccgtggc caccctggacc caggccaggc 2450
 ccggcccggc gagtggtcaa gggacaggga ccacctcacc gggcaaatgg 2500
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550
 ttgaatcctc ccaacaccca gcacgctgtc atccccactc cttgtgtgca 2600
 cacatgcaga ggtgagaccc gcaggctccc agggaccagca gccacaaggg 2650
 cagggttgga gccgggtcct cagctgtctg ctacgcagcc ctggaccgcg 2700
 gtgcgttacg tcaggccag atgcaggcg gcttttccaa ggctcctga 2750
 tggggccctc cgaagggtt ggagtcagcc ttggggagct gcctagcagc 2800
 ctctctcgg gcaggagggg aggtggcttc ctccaaagga caccgatgg 2850
 cagggtgccta gggggtgtgg ggttcgcttc tccctcccc tccactgaa 2900
 gtttgtgctt aaaaaacaat aaattgact tggcaccact gggggtttgt 2950
 gggagaggcc gtgtgacctg gctctctgtc ccagtgcac caggtcatcc 3000
 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu
 1 5 10 15
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
 20 25 30
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu	Ser Ala Gln Ala Ser	Val Leu Gln Ala Leu Thr
110		115 120
Glu His Gln Ala	Gln Pro Arg Leu Val	Gly Asp Gln Glu Gln Glu
125		130 135
Leu Leu Asp Thr	Leu Ala Asp Gln Leu	Pro Arg Leu Leu Ala Arg
140		145 150
Ala Ser Glu Leu	Gln Thr Glu Cys Met	Gly Leu Arg Lys Gly His
155		160 165
Gly Thr Leu Gly	Gln Gly Leu Ser Ala	Leu Gln Ser Glu Gln Gly
170		175 180
Arg Leu Ile Gln	Leu Leu Ser Glu Ser	Gln Gly His Met Ala His
185		190 195
Leu Val Asn Ser	Val Ser Asp Ile Leu	Asp Ala Leu Gln Arg Asp
200		205 210
Arg Gly Leu Gly	Arg Pro Arg Asn Lys	Ala Asp Leu Gln Arg Ala
215		220 225
Pro Ala Arg Gly	Thr Arg Pro Arg Gly	Cys Ala Thr Gly Ser Arg
230		235 240
Pro Arg Asp Cys	Leu Asp Val Leu Leu	Ser Gly Gln Gln Asp Asp
245		250 255
Gly Val Tyr Ser	Val Phe Pro Thr His	Tyr Pro Ala Gly Phe Gln
260		265 270
Val Tyr Cys Asp	Met Arg Thr Asp Gly	Gly Gly Trp Thr Val Phe
275		280 285
Gln Arg Arg Glu	Asp Gly Ser Val Asn	Phe Phe Arg Gly Trp Asp
290		295 300
Ala Tyr Arg Asp	Gly Phe Gly Arg Leu	Thr Gly Glu His Trp Leu
305		310 315
Gly Leu Lys Arg	Ile His Ala Leu Thr	Thr Gln Ala Ala Tyr Glu
320		325 330
Leu His Val Asp	Leu Glu Asp Phe Glu	Asn Gly Thr Ala Tyr Ala
335		340 345
Arg Tyr Gly Ser	Phe Gly Val Gly Leu	Phe Ser Val Asp Pro Glu
350		355 360
Glu Asp Gly Tyr	Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr Ala
365		370 375
Gly Asp Ser Leu	Leu Lys His Ser Gly	Met Arg Phe Thr Thr Lys
380		385 390
Asp Arg Asp Ser	Asp His Ser Glu Asn	Asn Cys Ala Ala Phe Tyr
395		400 405
Arg Gly Ala Trp	Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu Asn
410		415 420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 315
 cacacgtcca acctcaatgg gcag 24

<210> 316
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 316
 gaccagcagg gccaaaggaca agg 23

<210> 317
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 317
 gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 318
 gcagtcagag acttcccctg cccctcgctg ggaaagaaca ttaggaatgc 50
 ctttttagtgc cttgttcct gaactagctc acagtagccc ggcggcccag 100
 ggcaatccga ccacatttca ctctcaccgc ttaggaatc cagatgcagg 150
 ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
 atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250
 gcgcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300
 ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag cttgcaggaa gctgcagca tgtggctgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
 ttgtacagaa caatggaaat ggcattggaga caattgtac cagtctctata 600
 aagacagcaa aagttgggag gactgtaaat atttctgct tagtgaaaac 650
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgcc 750
 ctgacagtgg caaggcctgg ctgtggatgg atggaacccc tttcactttc 800
 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850
 tgtggccatc ctcaatggga tgatcttctc aaaggactgc aaagaattga 900
 agcgttgtgt ctgtgagaga agggcaggaa tgggtgaagcc agagagccct 950
 catgtccccc ctgaacatt aggcgaaggt gactgattcg cctctgcaa 1000
 ctacaatatg cagagtgcag caggcgggtgc caaagcaagg gctagttgag 1050
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtac 1100
 aaaatgggtt ctcggttttc ctgttcagga tcaccagcat ttctgagctt 1150
 gggtttatgc acgtatttaa cagtcacaag aagtcttatt tacatgccac 1200
 caaccaacct cagaaaccca taatgtcatc tgccctcttg gcttagagat 1250
 aacttttagc tctctttctt ctcaatgtct aatatcacc cctgttttc 1300
 atgtcttctc tacacttggt ggaataagaa actttttgaa gtagaggaaa 1350
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400
 ttggcagtca cttccagatc tgtaccagca aatacacaag gaattctttt 1450
 tgtttgttcc agttcatact agtcccttcc caatccatca gtaagacccc 1500
 catctgcctt gtccatgccg ttccccaaca gggatgtcac ttgatatgag 1550
 aatctcaaat ctcaatgcct tataagcatt ccttccctgt tccattaaga 1600
 ctctgataat tgtctccctc ccataggaat ttctccagg aaagaaatat 1650
 atcccatctc ccgtttcata tcagaactac cgccccgat attcccttca 1700
 gagagattaa agaccagaaa aaagtgagcc tcttcatctg cacctgtaat 1750
 agtttcagtt cctattttct tccattgacc catatttata cctttcaggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319
 <211> 280
 <212> FRT
 <213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
1				5					10					15
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Phe	Phe	Gln	Tyr	
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
<221> unsure
<222> 59, 95, 149, 331, 364, 438, 446
<223> unknown base

<400> 320
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50
gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100
cttttccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
ggtgctgctg atagggctgg cagcoctggg gcttttgttt tttcagtact 250
accagctctc caatactggt caagacacca tttctcaaat ggaagaaaga 300
ttaggaaata cgtcccaaga gttgcaatnt nttcaagtcc agaataataa 350
gcttgacaga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
ataacaaaagc tggaggaact ttgaaggagg gcaaaagntc ctcatntact 450
atacacacac cacttccc 468

<210> 321
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 321
atgcaggcca agtacagcag cac 23

<210> 322
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 322
catgctgacg acttctctga agc 23

<210> 323
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 323
ccacacagtc tctgcttctt ggg 23

<210> 324
<211> 40
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgtctggtatg atgatgggga caccaccatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50
gaggcgccgc tccggggatt cggctcgggc cgttggtctt gctctgcggg 100
gagggagcgg gcccgcccgc ggggcccagc cctccggat cggcccctc 150
cccggtccgc cccctcggga gactcctctg gctgctctgg gggttcggcg 200
gggcccggga cccgcggtcc gggcgccatg cgggcacgc tgctgtctgc 250
ggtgctgcgg cccgcagggc ccgtggccgt gggcatctcc ctgggcttca 300
ccctgagcct gctcagcgtc acctgggttg aggagccgtg cggcccaggc 350
ccgcccacac ctggagactc tgagctgccg ccgcgcggca acaccaacgc 400
ggcgccggcg cccaactcgg tcagcccggc agcggagcgc gagaagcccg 450
gggcggcgca aggcgcggg gagaattggg agccgcgcgt ctggccctac 500
caccctgcac agcccgcca gccgcgcaa aaggccgtca ggaccgccta 550
catcagcacg gagctgggca tcaggcagag gctgctggtg gcggtgctga 600
cctctcagac cagctgccc acgctgggcg tggccgtgaa ccgcacgctg 650
gggcaccggc tggagcgtgt ggtgttcctg acgggcgcac ggggcccggc 700
ggccccacct ggcctggcag tggtagcgtt gggcgaggag cgaccattg 750
gacacctgca cctggcgtg cggcacctgc tggagcagca cggcgacgac 800
tttgactggt tcttctcgtt gctgacacac acctacaccg aggcgcacgg 850
cctggcacgc ctaactggcc acctcagcct ggccctccgc gccacctgt 900
acctgggcgg gccccaggac ttcacggcg gagagcccac ccccgccgcg 950
tactgccacg gaggttttg ggtgctgctg tcgcgcatgc tgctgcaaca 1000
actgcgcccc cacctggaag gctgccgcaa cgacatcgct agtgccgcgc 1050
ctgacgagtg gctgggtcgc tgcatctctg atgccaccgg ggtgggctgc 1100
actgtgacac acgagggggg gcactatagc catctggagc tgagccctgg 1150
ggagccagtg caggaggggg accctcattt cogaagtgc ctgacagccc 1200
accctgtgcg tgacctgtg cacatgtacc agctgcacaa agctttcgcc 1250
cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300

gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350
 ggcccggtggg tattccagca ccatcccgcc cggcctcccg ctttgagggtg 1400
 ctgcgctggg actacttcac ggagcagcac gctttctcct gcgccgatgg 1450
 ctacccccg tgcctactgc gtggggctga cggggtgat gtggccgatg 1500
 ttctggggag agctctagag gagctgaacc gccgctacca ccggccttg 1550
 cggctccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600
 cgggggtatg gaatacacgc tggacttgca gctggaggca ctgaccccc 1650
 agggaggcgg ccggccctc actcgccgag tgcagctgct ccggccgctg 1700
 agccgctgg agatcttgcc tgtgccctat gtcactgagg cctcacgtct 1750
 cactgtgctg ctgcctctag ctggggctga gcgtgacct gccctggct 1800
 tcttgagggc ctttgccact gcagcactgg agcctggtga tgcgaggca 1850
 gccctgaccc tgctgtact gtatgagcgg ccgagggccc agcgcgtggc 1900
 ccatgcagat gtcttcgac ctgtcaaggc ccacgtggca gagctggagc 1950
 ggcggttccc cgggtcccg gtgccatggc tcagtgtgca gacagccgca 2000
 cctcaccac tgcgcctcat ggatctact tccaagaagc acccgctgga 2050
 cacactgttc ctgctggcgg gccagacac ggtgtcacg cctgaattcc 2100
 tgaaccgctg ccgcatgcat gccatctccg gctggcaggc cttcttccc 2150
 atgcatttcc aagccttcca ccaggtgtg gccccaccac aaggccctgg 2200
 gccccagag ctgggcccgtg aactggccg ctttgatcgc caggcagcca 2250
 gcgaggcctg cttctacaac tccgactacg tggcagcccg tgggcgcctg 2300
 gggcagcct cagaacaaga agaggagctg ctggagagcc tggatgtgta 2350
 cgagctgttc ctccacttct coagcttgca tgtgctgcgg cgggtggagc 2400
 cggcgctgct gcagcgtac cgggccaga cgtgcagcgc gaggtcagt 2450
 gaggacctgt accaccgctg cctccagagc gtgcttgagg gcctcggtc 2500
 ccgaaccag ctggccatgc tactcttga acaggagcag ggcaacagca 2550
 cctgacccca cctgtcccc gtgggcccgtg gcattggcac accccacccc 2600
 acttctcccc caaaaccaga gccacctgcc agcctcgctg ggcagggtg 2650
 gccgtagcca gacccaagc tggccactg gtccctctc tggctctgtg 2700
 ggtccctggg ctctggacaa gcactggggg acgtgcccc agagccacc 2750
 acttctcat ccaaaccag ttccctgcc cctgacgct gctgattcgg 2800
 gctgtggcct ccacgtattt atgcagtaca gtctgcctga ccgagccct 2850
 gcctctgggc cctgggggct gggctgtaga agagtgttg ggaaggagg 2900

gagctgagga gggggcatct cccaacttct ccccttttga cctgcccga 2950

gtccctgcc tttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro
1				5					10					15
Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser
				20					25					30
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro
				35					40					45
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg
				50					55					60
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly
				65					70					75
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro
				80					85					90
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg
				95					100					105
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu
				110					115					120
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val
				125					130					135
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe
				140					145					150
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val
				155					160					165
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala
				170					175					180
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe
				185					190					195
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala
				200					205					210
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr
				215					220					225
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly
				230					235					240
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu
				245					250					255
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile
				260					265					270

Val Ser Ala Arg	Pro Asp Glu Trp Leu Gly Arg Cys Ile Leu Asp	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp His Glu Gly Val His Tyr	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu Pro Val Gln Glu Gly Asp	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala His Pro Val Arg Asp Pro	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala Phe Ala Arg Ala Glu Leu	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu Leu Gln Trp Glu Ile Gln	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly Asp Arg Ala Ala Ala Trp	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg Pro Ala Ser Arg Phe Glu	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu Gln His Ala Phe Ser Cys	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu Arg Gly Ala Asp Arg Ala	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala Leu Glu Glu Leu Asn Arg	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln Lys Gln Gln Leu Val Asn	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg Gly Met Glu Tyr Thr Leu	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro Gln Gly Gly Arg Arg Pro	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg Pro Leu Ser Arg Val Glu	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu Ala Ser Arg Leu Thr Val	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg Asp Leu Ala Pro Gly Phe	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu Glu Pro Gly Asp Ala Ala	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Tyr Glu Pro Arg Gln Ala Gln	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala Pro Val Lys Ala His Val	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly Ala Arg Val Pro Trp Leu	575	580	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
590		595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
605		610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
620		625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
635		640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
650		655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
665		670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
680		685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
695		700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
710		715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
725		730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
740		745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
755		760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr	
770		775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg cgcacacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgaattctg 20

<210> 329

<211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 329
 atggctcagt gtgcagacag 20

 <210> 330
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 330
 gcctgctgct cctggaagta gtcc 24

 <210> 331
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 331
 atgcatggga aagaaggcct gccc 24

 <210> 332
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 332
 tgcactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

 <210> 333
 <211> 1095
 <212> DNA
 <213> Homo sapiens

 <400> 333
 gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
 gcctcctctg attggcaagc gctggccacc tccccacacc ccttggaac 100
 gctcccctag tggagaaaag gagtagctat tagccaatto ggcaggggccc 150
 gctttttaga agcttgattt cctttgaaga tgaagacta gcggaagctc 200
 tgctcttttc ccagctgggc gagggaaetc ggggcgattg gctgggaact 250
 gtatccaccc aaatgtcacc gatttcttcc tatgcaggaa atgagcagac 300
 ccatcaataa gaaatttctc agcctggccg aaaatggttg gccccacgaa 350
 gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc attttcttcc 500
 ccgccccgta gacctgcag caccatctgt catggcggct gggctgtttg 550
 gtttgagcgc tcgcgtcttt ttggcggcag cggcgacgcg agggctcccc 600
 gccgccccgc tccgctggga atctagcttc tccaggactg tggctgcccc 650
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700
 aggaccacga acccgaggac gaaaacttgt atgagaagaa ccagactcc 750
 catggttatg acaaggacc cgttttgac gcttggaaca tgcgacttgt 800
 cttctctttt ggcgtctcca tcactctggt ccttggcagc accttctgtg 850
 cctatctgcc tgactacagg atgaaagagt ggtcccgcg cgaagctgag 900
 aggcttgtga aataccgaga ggccaatggc cttcccatca tggaatccaa 950
 ctgcttcgac ccagcaaga tccagctgcc agaggatgag tgaccagttg 1000
 ctaagtgggg ctcaagaagc accgccttcc ccacccctg cctgccattc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
1				5					10				15	
Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
			20					25					30	
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35					40					45	
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
				50				55					60	
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
				65				70					75	
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
				80				85					90	
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
			95					100					105	
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
			110					115					120	
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
			125					130					135	
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
			140					145					150	

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgtttggtt tgagcgtcg ccgtcttttg gcggcagcgg 50
cgacgcgagg gctccccgcc gcccggtcc gctgggaatc tagcttctcc 100
aggactgtgg tcgccccgtc cgctgtggcg ggaaagcggc cccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgtatg 200
agaagaacc agactcccat ggttatgaca aggaccctgt tttggacgtc 250
tggaacatgc gacttgtctt cttctttggc gtctccatca tcctggctct 300
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350
cccgccgga agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgttttt gagccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctcaggact gtggtgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggcta tgccgcttgc tctgctcgtc ctgttgctcc tggggcccg 50
cgctctggtgc ctgacagaac cccacgcga cagcctgcgg gaggaacttg 100
tcatcaccoc gctgccttcc gggagcgtag cgcaccatt ccaggtcccg 150
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggt 200
ctttcccaaa gccctggggc agctgatctc caagtattct ctacggggagc 250
tgacactgtc attcacaaa ggcttttggg ggacccgata ctggggggcca 300
cccttctctc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttggaa ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca togactccac caacacagtc 450
actcccatcg cctccttcaa acccctgggt ctggccaatg aactgacca 500
ctactttctg cgctatgctg tgcctgcgcg ggaggtggtc tgcaccgaaa 550
acctcaccoc ctggaagaag ctcttgcctt gtagttccaa ggcaggccctc 600
tctgtgctgc tgaaggcaga tcgcttggtc cacaccagct accactccca 650
ggcagtgcat atccgccctg tttgcagaaa tgcacgctgt actagcatct 700
cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttoatcacg 750
gggcagggaa agaaagactg gtcctcttc cggatgttct cccgaaccct 800
cacggagccc tgcccctgg cttcagagag cagagtctat gtggacatca 850
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
actacatatc aggcgtcat cctaggcact cggaagacct atgccatcta 950
tgacttgctt gacaccgcca tgatcaacaa ctctcgaaa ctcaacatcc 1000
agctcaagtg gaagagaccc ccagagaatg agggccccc agtgcccttc 1050
ctgcacccc agcggtagct gagggtgctat gggctgcaga agggggagct 1100
gagcacactg ctgtacaaca cccaccata cggggccttc ccggtgtctg 1150
tgctggacac cgtaccctgg tatctgcgc tgatatgtga caccctcacc 1200
atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
tgcccaggac cggtgcgaac cccacctct ggagatgctg attcagctgc 1300
cgccaactc agtcaccaag gtttccatcc agtttgagcg ggcgtgtctg 1350
aagtggaccg agtacagcc agatcctaac catggcttct atgtcagccc 1400
atctgtctct agcgccttg tgcccagcat ggtagcagcc aagccagtgg 1450
actgggaaga ggtccctc ttcaacagcc tgttcccagt ctctgatggc 1500

tctaactact ttgtgcggct ctacacggag cgcgtgctgg tgaacctgcc 1550
 gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600
 tgggtggcgt gtgctacggc tccttctaca atctcctcac ccgaaccttc 1650
 cacatcgagg agccccgcac aggtggcctg gccaaagcggc tggccaaact 1700
 tatccggcgc gcccgaggtg tcccccaact ctgattcttg cctttccag 1750
 cagctgcagc tgccgtttct ctctggggag gggagcccaa gggctgtttc 1800
 tgccactgc tctcctcaga gttggctttt gaaccaaagt gccctggacc 1850
 aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
 gtggcatttg aatttgaatt aacttagaaa ttcatttctt cacctgtagt 1950
 ggccacctct atattgaggt gctcaataag caaaagtgtt cggtggctgc 2000
 tgtattggac agcacagaaa aagatttoca tcaccacaga aagtcgggt 2050
 ggcagcactg gccaaagtgat tgggggtgtg tacacagtgt atgtcactgt 2100
 gtatgggatg gagtttactg tttgtggaat aaaaacggct gttccgtgg 2150
 aaaaaaaaaa aa 2162

<210> 340
 <211> 574
 <212> PRT
 <213> Homo sapiens

<400> 340
 Met Pro Leu Ala Leu Val Leu Leu Leu Gly Pro Gly Gly
 1 5 10 15
 Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
 20 25 30
 Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
 35 40 45
 Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
 50 55 60
 His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
 65 70 75
 Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
 80 85 90
 Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
 95 100 105
 Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
 110 115 120
 Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
 125 130 135
 Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
 140 145 150

Ala Ser Phe Lys	Pro Leu Gly Leu	Ala Asn Asp Thr Asp His Tyr	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg	Glu Val Val Cys Thr Glu	170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys Ala	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr Ser	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn Ala	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser Val	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp Ser	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro Leu	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro Ser	455	460	465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val
				470					475					480
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser
				485					490					495
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu
				500					505					510
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile
				515					520					525
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr
				530					535					540
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly
				545					550					555
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly
				560					565					570

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
 caacatgggg tccagcagct tcttggctct catggtgtct ctcgttcttg 50
 tgaccttggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
 gtttgccag ctgacaacgt acgctgcttc aagtccgato cteccagtg 150
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcaact 200
 gtggttcaa gtgtgtgatt cctgtgaagg aactgaaga aggaggaaac 250
 aaggatgaag atgtgtcaag gccataacct gagccaggat gggaggccaa 300
 gtgtccaggc tctctctcta ccagggtgcc tcagaaatga tgcgtgggtcc 350
 tttctacctc tgggggtcac tctcacttgg cactgcccc tgaggggtcct 400
 gagacttgga atatgaaga agcaataccc aacccacca aagaaaacct 450
 gagcttgaag tctttttccc caaaaaggag gaagagtcac aaaaagtcca 500
 gaccccgagg acggtacttt cctctctac ctggtgctcc tcctaattgc 550
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
 aaagagctgc ctggcccttc tgcaatgtgt gatcacagct agaaggcaact 650
 gtgagagaag agaaactggt cctcaccaga tgctgaatct gctggtgctc 700
 tgatcttgga ctccaccgcc tctagaactg taagaataa atatttgctg 750
 tttataatcc aa 762

<210> 345
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu
 1 5 10 15
 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys
 20 25 30
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp
 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
 80 85 90
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
 95 100 105
 Thr Arg Cys Pro Gln Lys
 110

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
 aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtcac 50
 ttcttggtcca ggaacctga gcggtgagac tccagctgc ctacatcaag 100
 gccccaggac atgcagaacc ttctctaga acccgaccca ccaccatgag 150
 gtctctgctg tggagatgca ggcacctgag ccaaggcgtc cagtgtctct 200
 tgttcttggc tgtctgtgtc ttctttctct tgccttgcc ctcttttatt 250
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300
 agaaaggtct ctacagtccc tggcaaagcc taagtcccag gcccccacaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaacccagcc caaggccac accaccggag acagaggaaa 450
 ggaggccaac caggcacgcg cggaggagca ggacaagggt ccccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
 acactgtcac ccagagggca agatgcaggg atggcctctg gcaggcaga 600
 ggcaaatca tggagagcc aggcacaaa gacgaccca ggaatgggg 650
 gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
 ggcaaagcgg caaccacagc caagacgctc attcccaaaa gtcagcacag 750
 aatgtctgct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
 tgaccacagc agtcatccca cctaaggaga agaaacctca ggccaccca 850
 cccctgtccc ctttccagag ccccacgacg cagagaaacc aaagactgaa 900
 ggccgccaac ttcaaatctg agcctcggtg ggattttgag gaaaaataca 950
 gcttcgaat aggggcctt cagacgactt gccctgactc tgtgaagatc 1000
 aaagcctcca agtcgtgtg gctccagaaa ctctttctgc ccaacctcac 1050
 tctctctctg gactccagac acttcaacca gagtgtgtgg gacgcctg 1100
 aacactttgc accaccctt ggcttcatg agctcaacta ctcttgggtg 1150
 cagaaggctg tgacacgctt cctccagtg cccagcagc agctgtctct 1200
 ggcagcctc ccgctggga gctccggtg catcacctgt gccgtggtg 1250
 gcaacggggg catctgaac aactcccaca tgggccagga gatagacagt 1300
 cagactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350
 ggatgtggg actcggacat ccttctacg ctttaccgcc ttctccctga 1400
 cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttcctg gaaggcaccg gggactatga 1500
 gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaccttt 1550
 tctgggtcag gcacagaccg caggaagctt ttcgggaagc cctgcacatg 1600
 gacaggtacc tgttgctgca cccagacttt ctccgatata tgaagaacag 1650
 gtttctgagg tctaagaccg tggatggtgc ccactggagg atataccgcc 1700
 ccaccactgg ggccctcctg ctgctcactg cccctcagct ctgtgaccag 1750
 gtgagtgctt atggcttcat cactgagggc catgagcgct tttctgatca 1800
 ctactatgat acatcatgga agcggctgat cttttacata aacctgact 1850
 tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900
 cggctgtacc agcgtcctgg tcccgggaact gccaaagcca agaactgacc 1950
 ggggccaggg ctgccatggt ctccctgcct gctccaaggc acaggataca 2000
 gtgggaatct tgagactctt tggccatttc ccatggctca gactaagctc 2050
 caagcccttc aggagttcca agggaacact tgaacctagg acaagactct 2100
 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150
 ctgtaggtcc tgaggccagg gatttttaat taaatggggt gatgggtggc 2200
 caataccaca attcctgctg aaaaacactc ttccagtcga aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attcagatc gagtttacag ttgtgaaatc ttgaaggtat tacttaactt 2350
 cactacagat tgtctagaag acctttctag gagtatatct attctagaag 2400
 ggtctatact tgtccttgtc tttaagctat ttgacaactc tacgtgttgt 2450
 agaaaactga taataatata aatgattgtt gtccatggaa agggcaataa 2500
 atttctaca gtgaaaaaaaa aaaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Arg Ser Cys Leu Trp Arg Cys Arg His Leu Ser Gln Gly Val
 1 5 10 15
 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

	65		70		75
Tyr Ala Glu Pro	Ala Pro Glu Asn Asn	Ala Leu Asn Thr Gln	Thr		
	80	85	90		
Gln Pro Lys Ala His Thr Thr Gly Asp Arg Gly Lys Glu Ala Asn					
	95	100	105		
Gln Ala Pro Pro Glu Glu Gln Asp Lys Val Pro His Thr Ala Gln					
	110	115	120		
Arg Ala Ala Trp Lys Ser Pro Glu Lys Glu Lys Thr Met Val Asn					
	125	130	135		
Thr Leu Ser Pro Arg Gly Gln Asp Ala Gly Met Ala Ser Gly Arg					
	140	145	150		
Thr Glu Ala Gln Ser Trp Lys Ser Gln Asp Thr Lys Thr Thr Gln					
	155	160	165		
Gly Asn Gly Gly Gln Thr Arg Lys Leu Thr Ala Ser Arg Thr Val					
	170	175	180		
Ser Glu Lys His Gln Gly Lys Ala Ala Thr Thr Ala Lys Thr Leu					
	185	190	195		
Ile Pro Lys Ser Gln His Arg Met Leu Ala Pro Thr Gly Ala Val					
	200	205	210		
Ser Thr Arg Thr Arg Gln Lys Gly Val Thr Thr Ala Val Ile Pro					
	215	220	225		
Pro Lys Glu Lys Lys Pro Gln Ala Thr Pro Pro Ala Pro Phe					
	230	235	240		
Gln Ser Pro Thr Thr Gln Arg Asn Gln Arg Leu Lys Ala Ala Asn					
	245	250	255		
Phe Lys Ser Glu Pro Arg Trp Asp Phe Glu Glu Lys Tyr Ser Phe					
	260	265	270		
Glu Ile Gly Gly Leu Gln Thr Thr Cys Pro Asp Ser Val Lys Ile					
	275	280	285		
Lys Ala Ser Lys Ser Leu Trp Leu Gln Lys Leu Phe Leu Pro Asn					
	290	295	300		
Leu Thr Leu Phe Leu Asp Ser Arg His Phe Asn Gln Ser Glu Trp					
	305	310	315		
Asp Arg Leu Glu His Phe Ala Pro Pro Phe Gly Phe Met Glu Leu					
	320	325	330		
Asn Tyr Ser Leu Val Gln Lys Val Val Thr Arg Phe Pro Pro Val					
	335	340	345		
Pro Gln Gln Gln Leu Leu Leu Ala Ser Leu Pro Ala Gly Ser Leu					
	350	355	360		
Arg Cys Ile Thr Cys Ala Val Val Gly Asn Gly Gly Ile Leu Asn					
	365	370	375		
Asn Ser His Met Gly Gln Glu Ile Asp Ser His Asp Tyr Val Phe					

	380		385		390
Arg Leu Ser Gly	Ala Leu Ile Lys Gly Tyr	Glu Gln Asp Val Gly			
	395	400			405
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr Gln			
	410	415			420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu			
	425	430			435
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp			
	440	445			450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser			
	455	460			465
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg			
	470	475			480
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe			
	485	490			495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp			
	500	505			510
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu			
	515	520			525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly			
	530	535			540
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp			
	545	550			555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys			
	560	565			570
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile			
	575	580			585
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn			
	590	595			600

<210> 348
 <211> 496
 <212> DNA
 <213> Homo sapiens

<400> 348
 cgatgcgcgg acccgggcac cccctcctcc tggggctgct gctggtgctg 50
 gggccttcgc cggagcagcg agtggaatt gttcctcgag atctgaggat 100
 gaaggacaag ttctaaaaac accttacagg cctcttttat tttagtccaa 150
 agtgcagcaa acacttccat agactttatc acâacaccag agactgcacc 200
 attcctgcat actataaaag atgcgccagg cttcttacc ggctggctgt 250
 cagtccagtg tgcatggagg ataagtgagc agaccgtaca ggagcagcac 300
 accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350

ctttatacac atcccccat ggacaagaga tttatTTTTg cagacagact 400
 cttccataag tcctttgagt ttgtatggt gttgacagtt tgcagatata 450
 tattcgataa atcagtgtag ttgacagtggt tatctgtcac ttattt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val
 1 5 10 15
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
 gggctgggccc cgcgcgcagc tccagctggc cggcttggtc ctgcggtccc 50
 ttctctggga ggcccgcacc cggccgcgcc cagccccacc catgccacc 100
 gcggggctcc gccggggcgc gccgctcacc gcaatcgctc tgttggtgct 150
 gggggctccc ctggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg gggtttaact gcgagttctt caccttctgc 250
 tgcgggaact gctaccatcg gtactgctgc agggacctga ccttgcttat 300
 caccgagagg cagcagaagc actgcctggc cttcagcccc aagaccatag 350
 caggcatcgc ctcagctgtg atcctctttg ttgctgtggt tgcccacc 400
 atctgctgct tcctctgttc ctgttgctac ctgtaccgcc ggcgccagca 450
 gctccagagc ccatttgaag gccaggagat tccaatgaca ggcatcccag 500
 tgcagccagt ataccatac cccagggacc ccaaagctgg cctgcaccc 550
 ccacagcctg gcttcatgta cccacctagt ggtcctgctc cccaatatcc 600

actctaccga gctgggcccc cagtctacaa cctgcagct cctcctccct 650
 atatgccacc acagccctct taccgggag cctgaggaac cagccatgct 700
 tctgctgccc ctctcagtgat gccaaccttg ggagatgccc tcatcctgta 750
 cctgcacatg gtctctggggg tggcaggagt cctccagcca ccaggcccca 800
 gaccaagcca agccctgggc cctactgggg acagagcccc agggaagtgg 850
 aacaggagct gaactagaac tatgaggggt tggggggagg gcttgaatt 900
 atgggctatt ttactgggg gcaagggagg gagatgacag cctgggtcac 950
 agtgctgttt ttcaaatagt cctctgctc ccaagatccc agccaggaag 1000
 gctggggccc tactgtttgt cccctctggg ctgggggtgg gggaggagg 1050
 aggttcgctc agcagctggc agtagccctc ctctctggct gcccactgg 1100
 ccacatctct ggctgctag attaaagctg taaagacaaa a 1141

<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

Met	Pro	Pro	Ala	Gly	Leu	Arg	Arg	Ala	Ala	Pro	Leu	Thr	Ala	Ile	1	5	10	15
Ala	Leu	Leu	Val	Leu	Gly	Ala	Pro	Leu	Val	Leu	Ala	Gly	Glu	Asp	20	25	30	
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe	35	40	45	
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg	50	55	60	
Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln	65	70	75	
Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala	80	85	90	
Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys	95	100	105	
Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln	110	115	120	
Leu	Gln	Ser	Pro	Phe	Glu	Gly	Gln	Glu	Ile	Pro	Met	Thr	Gly	Ile	125	130	135	
Pro	Val	Gln	Pro	Val	Tyr	Pro	Tyr	Pro	Gln	Asp	Pro	Lys	Ala	Gly	140	145	150	
Pro	Ala	Pro	Pro	Gln	Pro	Gly	Phe	Met	Tyr	Pro	Pro	Ser	Gly	Pro	155	160	165	
Ala	Pro	Gln	Tyr	Pro	Leu	Tyr	Pro	Ala	Gly	Pro	Pro	Val	Tyr	Asn	170	175	180	

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
185 190 195

Gly Ala

<210> 352
<211> 3226
<212> DNA
<213> Homo sapiens

<400> 352
gggggagcta ggcggcgccg agtgggtggtg gcggggcgcc aagggtgagg 50
gcggcccccag aaccccaggt aggtagagca agaagatggt gttttgccc 100
ctcaaatggt ccttgcac catgtcatt ctactttcct cactgttggc 150
tctcttaact gtgtccact cttcatggtg tcagagcact gaagcatctc 200
caaaacgtag tgatgggaca ccatttcctt ggaataaaa acgacttctc 250
gagtacgtca tcccagtcca ttatgatctc ttgatccatg caaaccttac 300
cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
ccaccagcac catcatcctg catagtcacc acctgcagat atctaggggc 400
accctcagga agggagctgg agagaggcta toggaagaac ccctgcaggt 450
cctggaacac cccctcagg agcaaattgc actgctggct cccgagcccc 500
tccttgtcgg gctcccgta acagttgtca ttcactatgc tggcaatctt 550
tcggagactt tccacggatt ttacaaaagc acctacagaa ccaaggaagg 600
ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650
tggcctttcc ctgctttgat gaacctgcct tcaaagcaag ttctcaatc 700
aaaattagaa gagagccaag gcacctagcc atctccaata tggcattggg 750
gaaatctgtg actgttgctg aaggactcat agaagaccat tttgatgtca 800
ctgtgaagat gaggacctat ctggtggcct tcatcatctc agatttttag 850
tctgtcagca agataaccaa gagtggagtc aaggtttctg tttatgctgt 900
gccagacaag ataaatcaag cagattatgc actggatgct gcggtgactc 950
ttctagaatt ttatgaggat tatttcagca taccgtatcc cctacccaaa 1000
caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050
gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
cttctgcac aagtaagctt ggcacacag tgactgtggc ccatgaactg 1150
gcccaccagt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200
ttgggctaat gaaggatttg ccaaatattat ggagttttgt tctgtcagtg 1250
tgacccatcc tgaactgaaa gttggagatt atttctttgg caaatgtttt 1300

gagcgaatgg aggtagatgc tttaaattcc tcacaccctg tgtctacacc 1350
 tgtggaaaat cctgctcaga tccgggagat gtttgatgat gtttcttatg 1400
 ataaggggagc ttgtattctg aatatgctaa gggagtatct tagcgtgac 1450
 gcatttaaaa gtggtattgt acagtatctc cagaagcata gctataaaaa 1500
 tacaaaaaac gaggacctgt gggatagtat ggcaagtatt tgccctacag 1550
 atggtgtaaa agggatggat ggcttttgc ttagaagtca acattcatct 1600
 tcatcctcac attggcatca ggaaggggtg gatgtgaaaa ccatgatgaa 1650
 cacttgagaca ctgcagaggg gttttccct aataaccatc acagtggagg 1700
 ggaggaatgt acacatgaag caagagcact acatgaaggg ctctgacggc 1750
 gccccggaca ctgggtacct gtggcatgtt ccattgacat tcacaccag 1800
 caaatccaac atggctccatc gatttttgc taaaaacaaa acagatgtgc 1850
 tcatcctccc agaagaggtg gaatggatca aatttaattg gggcatgaat 1900
 ggctattaca ttgtgcatta cgagatgat ggaaggact ctttgactgg 1950
 ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000
 tcattaacaa tgcatttcag ctgcgcagca ttgggaagct gtccattgaa 2050
 aaggccttgg atttatccct gtaactgaaa catgaaactg aaattatgcc 2100
 cgtgtttcaa ggtttgaatg agctgattcc tatgtataag ttaattggaga 2150
 aaagagatat gaatgaagtg gaaactcaat tcaaggcctt cctcatcagg 2200
 ctgctaaggg acctcattga taagcagaca tggacagacg agggctcagt 2250
 ctacagacaa atgctgcgga gtgaactact actcctcgcc tgtgtgcaca 2300
 actatcagcc gtgcgtacag agggcagaag gctatttcag aaagtggagg 2350
 gaatccaatg gaaacttgag cctgcctgtc gacgtgacct tggcagtgtt 2400
 tgcgtggggg gccacagaca cagaaggctg ggattttctt tatagtaaat 2450
 atcagtttct tttgtccagt actgagaaaa gccaaattga atttgccttc 2500
 tgcagaaccc aaaaataagg aaagcttcaa tggctactag atgaaagctt 2550
 taaggagatg aaaaataaaa ctacaggagt tccacaaatt cttacactca 2600
 ttggcaggaa ccacagtaga taccactggt cctggcaatt tctgaggaaa 2650
 aactggaaca aactgtgaca aaagtttgaa cttggctcat cttccatagc 2700
 ccacatggta atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750
 aagaggtaaa aggattcttc agctctttga aagaaaatgg ttctcagctc 2800
 cgttgtgtcc aacagacaat tgaaccatt gaagaaaaca tcgggtggat 2850
 ggataagaat ttgataaaa tcagagtgtg gctgcaaagt gaaaagcttg 2900

aacgtatgta aaaattcctc ccttgcccggttctgttat ctctaatacac 2950
 caacattttg ttgagtgtat tttcaacta gagatggctg ttttggctcc 3000
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050
 aaagaatagc tgtagttttt tcatgaatgg gctttttcat gaatgggcta 3100
 togtaccat gtgttttgtt catcacaggt gttgccctgc aacgtaaacc 3150
 caagtgttgg gttccctgcc acagaagaat aaagtacctt attcttctca 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
 Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe
 1 5 10 15
 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser
 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

	215		220		225
Thr Val Ala Glu	Gly Leu Ile Glu Asp	His Phe Asp Val Thr	Val		
	230	235	240		
Lys Met Ser Thr	Tyr Leu Val Ala Phe	Ile Ile Ser Asp Phe	Glu		
	245	250	255		
Ser Val Ser Lys	Ile Thr Lys Ser Gly	Val Lys Val Ser Val	Tyr		
	260	265	270		
Ala Val Pro Asp	Lys Ile Asn Gln Ala	Asp Tyr Ala Leu Asp	Ala		
	275	280	285		
Ala Val Thr Leu	Leu Glu Phe Tyr Glu	Asp Tyr Phe Ser Ile	Pro		
	290	295	300		
Tyr Pro Leu Pro	Lys Gln Asp Leu Ala	Ala Ile Pro Asp Phe	Gln		
	305	310	315		
Ser Gly Ala Met	Glu Asn Trp Gly Leu	Thr Thr Tyr Arg Glu	Ser		
	320	325	330		
Ala Leu Leu Phe	Asp Ala Glu Lys Ser	Ser Ala Ser Ser Lys	Leu		
	335	340	345		
Gly Ile Thr Val	Thr Val Ala His Glu	Leu Ala His Gln Trp	Phe		
	350	355	360		
Gly Asn Leu Val	Thr Met Glu Trp Trp	Asn Asp Leu Trp Leu	Asn		
	365	370	375		
Glu Gly Phe Ala	Lys Phe Met Glu Phe	Val Ser Val Ser Val	Thr		
	380	385	390		
His Pro Glu Leu	Lys Val Gly Asp Tyr	Phe Phe Gly Lys Cys	Phe		
	395	400	405		
Asp Ala Met Glu	Val Asp Ala Leu Asn	Ser Ser His Pro Val	Ser		
	410	415	420		
Thr Pro Val Glu	Asn Pro Ala Gln Ile	Arg Glu Met Phe Asp	Asp		
	425	430	435		
Val Ser Tyr Asp	Lys Gly Ala Cys Ile	Leu Asn Met Leu Arg	Glu		
	440	445	450		
Tyr Leu Ser Ala	Asp Ala Phe Lys Ser	Gly Ile Val Gln Tyr	Leu		
	455	460	465		
Gln Lys His Ser	Tyr Lys Asn Thr Lys	Asn Glu Asp Leu Trp	Asp		
	470	475	480		
Ser Met Ala Ser	Ile Cys Pro Thr Asp	Gly Val Lys Gly Met	Asp		
	485	490	495		
Gly Phe Cys Ser	Arg Ser Gln His Ser	Ser Ser Ser Ser His	Trp		
	500	505	510		
His Gln Glu Gly	Val Asp Val Lys Thr	Met Met Asn Thr Trp	Thr		
	515	520	525		
Leu Gln Arg Gly	Phe Pro Leu Ile Thr	Ile Thr Val Arg Gly	Arg		

530	535	540
Asn Val His Met Lys Gln Glu His Tyr	Met Lys Gly Ser Asp Gly	
545	550	555
Ala Pro Asp Thr Gly Tyr Leu Trp His	Val Pro Leu Thr Phe Ile	
560	565	570
Thr Ser Lys Ser Asn Met Val His Arg	Phe Leu Leu Lys Thr Lys	
575	580	585
Thr Asp Val Leu Ile Leu Pro Glu Glu	Val Glu Trp Ile Lys Phe	
590	595	600
Asn Val Gly Met Asn Gly Tyr Tyr Ile	Val His Tyr Glu Asp Asp	
605	610	615
Gly Trp Asp Ser Leu Thr Gly Leu Leu	Lys Gly Thr His Thr Ala	
620	625	630
Val Ser Ser Asn Asp Arg Ala Ser Leu	Ile Asn Asn Ala Phe Gln	
635	640	645
Leu Val Ser Ile Gly Lys Leu Ser Ile	Glu Lys Ala Leu Asp Leu	
650	655	660
Ser Leu Tyr Leu Lys His Glu Thr Glu	Ile Met Pro Val Phe Gln	
665	670	675
Gly Leu Asn Glu Leu Ile Pro Met Tyr	Lys Leu Met Glu Lys Arg	
680	685	690
Asp Met Asn Glu Val Glu Thr Gln Phe	Lys Ala Phe Leu Ile Arg	
695	700	705
Leu Leu Arg Asp Leu Ile Asp Lys Gln	Thr Trp Thr Asp Glu Gly	
710	715	720
Ser Val Ser Glu Gln Met Leu Arg Ser	Glu Leu Leu Leu Leu Ala	
725	730	735
Cys Val His Asn Tyr Gln Pro Cys Val	Gln Arg Ala Glu Gly Tyr	
740	745	750
Phe Arg Lys Trp Lys Glu Ser Asn Gly	Asn Leu Ser Leu Pro Val	
755	760	765
Asp Val Thr Leu Ala Val Phe Ala Val	Gly Ala Gln Ser Thr Glu	
770	775	780
Gly Trp Asp Phe Leu Tyr Ser Lys Tyr	Gln Phe Ser Leu Ser Ser	
785	790	795
Thr Glu Lys Ser Gln Ile Glu Phe Ala	Leu Cys Arg Thr Gln Asn	
800	805	810
Lys Glu Lys Leu Gln Trp Leu Leu Asp	Glu Ser Phe Lys Gly Asp	
815	820	825
Lys Ile Lys Thr Gln Glu Phe Pro Gln	Ile Leu Thr Leu Ile Gly	
830	835	840
Arg Asn Pro Val Gly Tyr Pro Leu Ala	Trp Gln Phe Leu Arg Lys	

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser			
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg			
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu			
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile			
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg			
	920		925		930
Val Trp Leu Gln	Ser Glu Lys Leu Glu Arg Met				
	935		940		

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
 cagccacaga cgggtcatga gcgcggtatt actgctggcc ctccctgggt 50
 tcatctcccc actgccagga gtgcaggcgc tgctctgcc gtttgggaca 100
 gttcagcatg tgtggaaggt gtccgaccta ccccgcaat ggaccacctaa 150
 gaacaccagc tgcgacagcg gcttgggggtg ccaggacacg ttgatgtcca 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
 gccaaaggacc aggagccccg cgtcactgag caccggatgg gccccggcct 300
 ctccctgata tctacacct tcgtgtgccg ccaggaggac ttctgcaaca 350
 acctcgtaa ctccctcccc ctttggggccc cacagccccc agcagaccca 400
 ggatccttga ggtgccagct ctgcttgtct atggaaggct gctctggagg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tctcaggct caggggagga ggcattctct ccaatctgag agtccaggga 550
 tgcagcccc agccagggtg caacctgctc aatgggacac aggaaattgg 600
 gccctggggt atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcgggggac caccattatg acacacggaa acttggtctca agaaccact 700
 gattggacca catcgaatac cgagatgtgc gagtgggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctgggtggga 800
 caaaaggctg cagcactgtt ggggctcaaa attccagaa gaccaccatc 850
 cactcagccc ctctgggggt gcttggggcc tctatatacc acttctgtct 900
 ctcgacactg tgoaatagtg ccagcagcag cagcgttctg ctgaactccc 950

tcctctctca agctgcccct gtcccaggag accggcagtg tctacactgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgcc 1050
 cagggggcgc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcagggtc gcgtggccca acctccagc 1150
 ttctgttgga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgtgatgtg cagcctcctg cctctcagca tgaggggagt ggggctgagg 1250
 gcttgagatc tctcacttgg ggggtggggc tggcactggc cccagcgtg 1300
 tgggtgggag tgggttgccc ttcctgctaa ctctattacc cccagcgtg 1350
 ttcaccgctg ctgaccacc acactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gcttgagca tccggacttg ccctatggga gaggggacgc tggaggagt 1550
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro
1				5					10				15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val
				20					25				30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro
				35					40				45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu
				50					55				60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys
				65					70				75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His
				80					85				90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys
				95					100				105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu
				110					115				120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro
				125					130				135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu
				140					145				150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg

	155		160		165
Arg Gly Gly Gly	Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys	Met		
	170		175		180
Pro Gln Pro Gly	Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile	Gly		
	185		190		195
Pro Val Gly Met	Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu	Thr		
	200		205		210
Cys His Arg Gly	Thr Thr Ile Met Thr	His Gly Asn Leu Ala	Gln		
	215		220		225
Glu Pro Thr Asp	Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu	Val		
	230		235		240
Gly Gln Val Cys	Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly	Leu		
	245		250		255
Thr Ser Thr Leu	Val Gly Thr Lys Gly	Cys Ser Thr Val Gly	Ala		
	260		265		270
Gln Asn Ser Gln	Lys Thr Thr Ile His	Ser Ala Pro Pro Gly	Val		
	275		280		285
Leu Val Ala Ser	Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys	Asn		
	290		295		300
Ser Ala Ser Ser	Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro	Gln		
	305		310		315
Ala Ala Pro Val	Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val	Gln		
	320		325		330
Pro Leu Gly Thr	Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys	Pro		
	335		340		345
Arg Gly Ala Thr	His Cys Tyr Asp Gly	Tyr Ile His Leu Ser	Gly		
	350		355		360
Gly Gly Leu Ser	Thr Lys Met Ser Ile	Gln Gly Cys Val Ala	Gln		
	365		370		375
Pro Ser Ser Phe	Leu Leu Asn His Thr	Arg Gln Ile Gly Ile	Phe		
	380		385		390
Ser Ala Arg Glu	Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln	His		
	395		400		405
Glu Gly Gly Gly	Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly	Val		
	410		415		420
Gly Leu Ala Leu	Ala Pro Ala Leu Trp	Trp Gly Val Val Cys	Pro		
	425		430		435

Ser Cys

<210> 356
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 356
 gcgacgggca ggacgccccg ttgccttagc gcgtgctcag gagttggtgt 50
 cctgcctgcg ctcagtagta gggggaatct gcccctgggt ggcgttctaa 100
 tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagccggct 150
 ggcgatgacg cctgctctgt gcagatcctc gtccctgggc tcaaaagggga 200
 tgcgggagag aaggagagca aaggcgcccc cggaaggcct ggaagagtcg 250
 gccccacggg agaaaaagga gacatggggg acaaaaggaca gaaaggcagt 300
 gtgggtgctc atggaaaaat tggtoeccatt ggctctaaag gtgagaaaag 350
 agattccggt gacataggac ccctcggtcc taatggagaa ccaggcctcc 400
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgcccg 500
 tgtgcgcgag acggagagca agatctacct gctgggtgaag gaggagaagc 550
 gtacacggga cggccagctg tcctgccagg gccgcggggg cagctgagc 600
 atgcccgaag acgagggctg caatggcctg atggccgcat acctggcgca 650
 agccggcctg gcccggtgtc tcatcgcat caacgacctg gagaaggagg 700
 gcgccttcgt gtactctgac cactccccc tgccgacctt caacaagtgg 750
 cgacgagggt agcccaacaa tgctacgac gaggaggact gcgtggagat 800
 ggtggcctcg ggcggctgga acgacgtggc ctgccacacc accatgtact 850
 tcatgtgtga gtttgacaag gagaacatgt gaggctcagg ctggggctgc 900
 ccattggggg cccacatgt ccctgcaggg ttggcaggga cagagcccag 950
 accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
 tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050
 aaaaagaaag tgttctcggg gtgctgtctc tgaagaagca gagtttcatt 1100
 acctgtattg tagccccaat gtcattatgt aattattacc cagaattgct 1150
 ctccataaaa gcttgtgcct ttgtccaagc tataacaataa aatctttaag 1200
 tagtgacgta gttaagtcca aaaaaaaaaa aaaaaaaaaa 1238

<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
 Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala
 1 5 10 15
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	45
				35					40						
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	60
				50					55						
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	75
				65					70						
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	90
				80					85						
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	105
				95					100						
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	120
				110					115						
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	135
				125					130						
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	150
				140					145						
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	165
				155					160						
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	180
				170					175						
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	195
				185					190						
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	210
				200					205						
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	225
				215					220						
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	240
				230					235						
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	255
				245					250						
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	270
				260					265						

Met

<210> 358
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 358
 agtgactgca gccttctag atccctcca ctctgtttct ctctttgcag 50
 gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100
 gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttggggct gtctgtaagg agccacagga ggagggtggt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
 gggaaagaca ggacctttct taccttcagt gaggggttct cgcccccttc 500
 atoccaatca gcttgatcc acaggaagt cttccctggg aacagaggag 550
 cagagacctt tataagactc tctacggat gtgaatcaag agaacgtccc 600
 cagctttggc atcctcaagt atcccccag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
 cagggtgcga cgctcctgtt accctttctc ttcctgttc ttgtaacatt 750
 cttgtgcttt gactcctctt ccatcttttc tacctgacct tgggtgaggaa 800
 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850
 ctagagttcc tgtagtgctc tacattaaaa atataatgtc tctctctatt 900
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 359
 Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu
 1 5 10 15
 Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val
 20 25 30
 Val Pro Gly Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln
 35 40 45
 Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu
 50 55 60
 Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr
 65 70 75
 Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met
 80 85 90
 Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu
 95 100 105
 Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly
 110 115 120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

<400> 360
ggcgctctcc ggctgctcct attgagctgt ctgctcgctg tgcccgcgtg 50
gcctgctgtg ccgcgcgtgt cgccgcgtgt accgcgtctg ctggacgcgg 100
gagacgccag cagctcgggt attggagccc tgcggagagc tcaagcgccc 150
agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
ggagtggagc catgagctgc gtcctgggtg gtgtcatccc cttggggctg 250
ctgttctctg tctgcggatc ccaaggctac ctctcgccca acgtcactct 300
cttagaggag ctgctcagca aataccagca caacgagtct cactcccggg 350
tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtacat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
tgtgatggct ggctcagggt ctctctctgc aggggaggat ccggtctctg 600
ttctgtttt tttgtttgtt ttgagacagg gtctcactct gccactgacg 650
ctggagtga atggcacaat cgtcatgcc tgaacacctta gactcccggg 700
gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750
accatggtgc ccagctagat tttaaatatt ttgtggagat gggggctctg 800
ctacgttgcc caggctgggc ttgaactcct aggctcaagc aatectcctg 850
cctcagcctc tcaaagtgtc aggtattatg gcatgagtca cctgtctg 900
ctctggctct gttcttaaca ttctgcaaaa acaacacacg tgggttccct 950
gtgcagagcc tgccctggtg cctcatgtc actcttggtg gctccactgg 1000
gaacacagct ctacgccttt ccacotgga ggagagtgg gggggggccc 1050
agggctgggc tttgctgatg ctgatctcag ctgtgccaca cgctagctgc 1100
accaccctga cttctcctta gccctgtgta gcctcacttt ccacttgagg 1150
agtccttctc cgctggtgtg ccatgactgt gagataagtc gaggtgtgta 1200
agggcccgcc acagactgac ctgcctcccc aaccctaggt cttgtctaac 1250
cgggaaagga gctaacggtg acagaagaca gccaaaggta accctccggg 1300
gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaaa cttccttctt ggcgtggttt ccagaactac 1400
 agaggaatgg accacagttct tccagggtcc ctcctcgtcc accaaccggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500
 cacgtoccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550
 caagttagcc gggcatgggt gtgcgcacct gtagtcccag ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtggg ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
 1 5 10 15
 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
 aaggagaggc caccgggact tcagtgtctc ctccatocca ggagcgagc 50

ggccactatg gggctctgggc tgcccttctg cctcctcttg accctccttg 100
gcagctcaca tggaacaggc cggggtatga ctttgcaact gaagctgaag 150
gagctctttc tgacaaattc ctcctatgag tccagcttcc tgggaattgct 200
tgaaaagctc tgcctcctcc tccatctccc ttcagggaacc agcgtcacc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgtcctctt ggcccggtt tttgggccc ggatgcagga 350
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400
ataataaaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75
Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
aattgtatct gtgtaattgtt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaaga actcttttaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttcctcc actgtgttct gtgtgctatt aatattttacc 200
attgcagaag cttcattcag tgttgaaaaa gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttccctcccc ctccgattgt totaaataat tgaagatgt ctgctgtgga 350
aaaaggcatg tatttaaatc tgtatgatto tcaaccatct ttagtgtgga 400
aaggctccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttgtt acgctagtaa 500
 aatagaaacc tgtgtttatt ctcagggtatt ttagaataaa cagccatcat 550
 tttattttat ggtgtgtgttc ttggcgtgtat tcataaatta tatattttgg 600
 gctatcaaat attacttcat tcaatataaa taacaatagt agaagttgtt 650
 tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
 ttgttgaat agcctttgaa atttacagta ctgtctctct actatcttca 750
 gattacttga ttcaataaaa ccaattatgt ttgtaattga tattaataaa 800
 accagaataa aagttcatat ctaccc 826

<210> 365
 <211> 67
 <212> PRT
 <213> Homo sapiens

<400> 365
 Met Ile Gly Tyr Tyr Leu Ile Leu Phe Leu Met Trp Gly Ser Ser
 1 5 10 15
 Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser
 20 25 30
 Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
 35 40 45
 Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
 50 55 60
 Leu Pro Ser Asp Cys Ser Lys
 65

<210> 366
 <211> 2475
 <212> DNA
 <213> Homo sapiens

<400> 366
 gaggaattgc cacagcagcg gatagagcag gagagcacca cggagccct 50
 tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100
 ttttcgagga tgatgggtgc ccttcgagga gcttctgcat tgcgtgttct 150
 gttccttgca gcttttctgc ccccgccgca gtgtaccag gaccagcca 200
 tgggtcatta catctaccag cgctttcgag tcttgagca agggctgaa 250
 aaatgtatcc aagcaacgag ggcatacatt caagaattcc aagagtcttc 300
 aaaaaatata tctgtcatgc tgggaagatg tcagacctac acaagttagt 350
 acaagagtgc agtgggtaac ttggcactga gagttgaacg tgcccaacgg 400
 gagattgact acatacaata ccttcgagag gctgacgagt gcacgtatc 450
 agaggacaag aactggcag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550
 ataaagtctt tgaataatgt gaagaagatg atggacacac atggctcttg 600
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
 ccagaaacaa cactgtttgg gaatttgcaa acatacgggc attcatggag 700
 gataaacacca agccagctcc ccggaagcaa atcctaacac tttcctggca 750
 gggaacaggc caagtgatct acaaaggttt tctatttttt cataaccaag 800
 caacttctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
 gatcgaatgc tgcctccagg aggggtaggc cgagcattgg tttaccagca 900
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950
 ccatccactc tgggccaggc acccatagcc atttggttct cacaagatt 1000
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
 ccaggatgct gaagcctcat tcctcttggt tgggggttct tatgtggtct 1100
 acagtactgg gggccagggc cctcatcgca tcacctgcac ctatgatcca 1150
 ctgggcacta tcagtgagga ggacttgccc aacttgttct tccccagag 1200
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250
 atgcctggaa tgaaaggaaac cagatcattt acaaactcca gacaaagaga 1300
 aagctgcctc tgaaagtaatg cattacagct gtgagaagaa gcaactgggc 1350
 tttggcagct gttctacagg acagtggagg tatagccctc tcacaatata 1400
 gtatccctct aatcacacac aggaagagtg tgtagaagtg gaaatacgtg 1450
 tgctcctctt cccaaatgac actgccttag gtatcttcca agagcttaga 1500
 tgagagcata tcacagagaa agtttcaaca atgtccatta ctccccaaa 1550
 cctctggctc ctcaaggatg accacattct gatacagcct acttcaagcc 1600
 ttttgtttta ctgctcccca gcatttactg taactctgcc atcttccctc 1650
 ccacaattag agttgtatgc cagcccttaa tattcaccac tggcttttct 1700
 ctccccctgc ctttgctgaa gctcttcctc ctttttcaaa tgtctattga 1750
 tattctccca ttttcaactgc ccaactaaaa tactattaat atttctttct 1800
 tttcttttct tttttttgag acaaggtctc actatgttgc ccaggctgg 1850
 ctcaaactcc agagctcaag agatcctcct gcctcagcct cctaagtacc 1900
 tgggattaca ggcatgtgcc accacacctg gcttaaaata ctatttotta 1950
 ttgaggttta acctctatct cccctagccc tgcctctcca ctaagcttgg 2000
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaaca 2100

tgcacaagtc ttacacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaaagtga aagatacagc tagaaaatac tacaatatcc atagtttttc 2200
 cattgcccaa ggaagcatca aatacgtatg tttgttcacc tactcttata 2250
 gtcaatgcgt tcacgttttc agcctaaaaa taatagtctg tccctttagc 2300
 cagttttcat gtctgcacaa gacctttcaa taggccttcc aaatgataat 2350
 tctccagaa aaccagtcta aggggtgagga cccaactct agcctctct 2400
 tgtctgtctg tctctgttt ctctcttct gctttaaatt caataaaagt 2450
 gacactgagc aaaaaaaaa aaaaa 2475

<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
 1 5 10 15
 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala
 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu
 215 220
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn
 230 235 240
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly
 245 250 255
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile
 260 265 270
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly
 275 280 285
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly
 290 295 300
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln
 305 310 315
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val
 320 325 330
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr
 335 340 345
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe
 350 355 360
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro
 365 370 375
 Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile
 380 385 390
 Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys
 395 400

<210> 368
 <211> 2281
 <212> DNA
 <213> Homo sapiens

<400> 368
 gggcgccgc gtactcacta gctgaggtgg cagtgggtcc accaacatgg 50
 agctctcgca gatgtcggag ctcatggggc tgtcgggtgt gcttgggetg 100
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150
 ggaggagagg agcggccggc ccgcctgcc aaaaagcaaat ggatttccac 200
 ctgacaaatc ttccgggatcc aagaagcaga aacaatatca gcggattcgg 250
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tggtctgcagc 300
 tctgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350
 gcaaatacct ggctacctgt gcagatgac gcaccatccg catctggagc 400
 accaaggact tcctgcagcg agagcaccgc agcatgagag ccaactgga 450

gctggaccac gccaccctgg tgcgcttcag cctgactgc agagccttca 500
 tcgtctggct ggccaacggg gacaccctcc gtgtcttcaa gatgaccaag 550
 cgggaggatg ggggctacac cttcacagcc accccagagg acttccttaa 600
 aaagcacaag gcgcctgtca tcgacattgg cattgtctaac acaggggaag 650
 ttatcatgac tgctccagtg gacaccactg tctcatctg gagcctgaag 700
 ggtaagtgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750
 tgctgtatct cctgtggca gattttagc ctctgtggc ttcacccag 800
 atgtgaaggt ttgggaagtc tgctttggaa agaaggggga gttccaggag 850
 gtggtgcgag ccttcgaact aaaggccac tccgcggctg tgcactcgtt 900
 tgctttctcc aacgactcac ggaggatggc ttctgtctcc aaggatggt 950
 catgaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000
 tacttgctga agacaggccg cttgaagag gcggcgggtg ccgcgcctg 1050
 ccgcctggcc ctctcccca acgcccaggt cttggccttg gccagtggca 1100
 gtagtattca tctotacaat acccgccggg gcgagaagga ggagtgcctt 1150
 gagcgggtcc atggcgagtg tatcgccaac ttgtccttg acatcactgg 1200
 ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg tttaacaaca 1250
 ctcttgcca ccgagccatg gtggaggaga tgcaggcca cctgaagcgg 1300
 gcctccaacg agagcaccg ccagaggctg cagcagcagc tgaccaggc 1350
 ccaagagacc ctgaagagcc tgggtgccct gaagaagtga ctctgggagg 1400
 gcccggcgca gaggattgag gaggagggat ctggcctcct catggcactg 1450
 ctgccatctt tctccagc tggaagcctt tcagaaggag tctcctgggt 1500
 ttcttactgg tggcctgtct tcttccatt gaaactactc ttgtctactt 1550
 aggtctctct ctctctgctg gctgtgactc ctccctgact agtggccaag 1600
 gtgcttttct tctccagc ccagtgggg ggaatctgtc ccacactggc 1650
 actgaggaga atggttagaga ggagaggaga gagagagaga atgtgatttt 1700
 tggccttggt gcagcacatc ctcacacca aagaagtttg taaatgttcc 1750
 agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800
 ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850
 ctaagggtatt tcttctggg cctcagttct atttgtaaga tggagaataa 1900
 tctctctgtg gaaotccttg caaagatgat atgaggctaa gagaatatca 1950
 agtccccagg tctggaagaa aagtagaaaa gtagtagtact attgtccaat 2000
 gtcataaag tggtaaaagt gggaaccagt gtgcttgaa accaaattag 2050

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
 tatatggttg ggacttctct cttcgggaga tgatatcttg ttaaggaga 2150
 cctcttttca gttcatcaag ttcacagat atttgagtgc ccactctgtg 2200
 cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu
1				5					10					15
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly
				20					25					30
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln
				35					40					45
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys
				50					55					60
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His
				65					70					75
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser
				80					85					90
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu
				95					100					105
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys
				110					115					120
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu
				125					130					135
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala
				140					145					150
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys
				155					160					165
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro
				170					175					180
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly
				185					190					195
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr
				200					205					210
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile
				215					220					225
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys
				230					235					240

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50
 catctaaaca ggcagtgttt tgccttcacc ccaagtgacc atgagaggtg 100
 ccacgcgagt ctcaatcatg ctctcctag taactgtgtc tgactgtgct 150
 gtgatcacag gggcctgtga gcggaatgtc cagtgtgggg caggcacctg 200
 ctgtgccatc agcctgtggc ttogagggtc gcggaatgtc accccgctgg 250
 ggcgggaagg cgaggagtgc caccocggca gccacaaggt ccctctcttc 300
 aggaacgcga agcaccacac ctgtccttgc ttgcaccaac tgctgtgctc 350
 caggttcccg gacggcaggt accgctgctc catggacttg aagaacatca 400

atttttaggc gcttgccctgg tctcaggata cccaccatcc ttttctgag 450
 cacagcctgg atttttatct ctgccatgaa acccagctcc catgactctc 500
 ccagtcctta cactgactac cctgatctct ctgtgtctagt acgcacatat 550
 gcacacaggg agacatacct cccatcatga catggtcccc aggctggcct 600
 gaggatgtca cagcttgagg ctgtggtgtg aaagtggtgcc agcctgggtc 650
 tcttccctgc tcaggctgcc agagaggtgg taaatggcag aaaggacatt 700
 cccctccccc tcccagggtg acctgctctc tttctggggc cctgcccttc 750
 tcccacatg tatccctcgg tctgaattag acattcctgg gcacaggctc 800
 ttgggtgcat tgctcagagt cccaggctct ggccctgacc tcaggccctt 850
 cacgtgaggt ctgtgaggac caatttggg gtatgtcctc ttcctcogt 900
 tggtaactc cttagtcca gaccacagac tcaagattgg ctcttcccag 950
 agggcagcag acagtccccc caaggcaggt gtaggggacc caggagggcc 1000
 aatcagcccc ctgaagactc tgggtccagt cagcctgtgg cttgtggcct 1050
 gtgacctgtg acctctgtcc agaattgtca tgccctctgag gccctctctt 1100
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
 cattaaaaatg caaatgggtg tggttcaatc taatctgata ttgacatatt 1200
 agaaggcaat tagggtgttt ccttaaacaa ctcccttcca aggatcagcc 1250
 ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300
 ggtgggagca agggacaggg agcagggcag gggctgaaa gggcactgat 1350
 tcagaccagg gaggcaacta cacaccaaca tgctggcttt agaataaaa 1400
 caccaactga aaaaa 1415

<210> 371
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 371
 Met Arg Gly Ala Thr Arg Val Ser Ile Met Leu Leu Leu Val Thr
 1 5 10 15
 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
 20 25 30
 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
 35 40 45
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
 50 55 60
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
 65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 372
 agcgcccggg cgctcgggggt gtaaaaggcc ggcagaaggg aggcacttga 50
 gaaatgtctt tctccagga cccaagtctt ttcaccatgg ggaagtgggc 100
 cattgggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
 acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
 caggctgttt cctctgtcga gaggaagctg cggaatctgc ctccctgaaa 350
 agcatgttgg accagctggg cgccccctc tatgcagtgg taaaggagca 400
 catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450
 tcttgatga aaagaaaaag ttctatggto cacaaggcgg gaagatgatg 500
 tttatgggat ttatcogtct gggagtgtgg tacaacttct tccgagcctg 550
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
 gagttttgtt ggtgggatca ggaaagcagg gcattcttct tgagcaccga 650
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaaagtgc 700
 taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750
 aaactgcccc gctcagggat aaccagggac attcacctgt gttcatggga 800
 tgtattgttt ccaactcgtg coctaaggag tgagaaaccc atttatactc 850
 tactctcagt atggattatt aatgtatttt aatattctgt ttaggccacc 900
 taaggcaaaa tagcccaaaa acaagactga caaaaatctg aaaaactaat 950
 gaggattatt aagctaaaac ctgggaaata ggaggtctaa aattgactgc 1000
 caggctgggt gcagtggctc acacctgtaa tcccagcact ttgggaggcc 1050
 aagggtgaca agtcacttga ggtcgggagt tgcagaccag cctgagcaac 1100
 atggcgaaac ccogtctcta ctaaaaatac aaaaatoacc cgggtgtggt 1150
 ggcaggcacc tgtagtccca gctaccggg aggctgaggc aggagaatca 1200
 cttgaacctg ggaggtggag gttgcggtga gctgagatca caccactgta 1250
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373
 Met Ser Phe Leu Gln Asp Pro Ser Phe Phe Thr Met Gly Met Trp
 1 5 10 15
 Ser Ile Gly Ala Gly Ala Leu Gly Ala Ala Leu Ala Leu Leu
 20 25 30
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala
 35 40 45
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
 50 55 60
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
 65 70 75
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
 80 85 90
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
 95 100 105
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
 110 115 120
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
 125 130 135
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
 140 145 150
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
 155 160 165
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
 170 175 180
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
 185 190 195
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu
 200 205 210
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
 215 220 225
 Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374
 acggaccgag ggttcgagg agggacacgg accaggaacc tgagctaggt 50
 caaagacgcc cgggccaggt gccccgtcgc aggtgccctt ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttctctggcg ctgccaaacc 150
gccaccaccag ccatggcgaa ccccgggctg gggctgtctc tggcgctggg 200
cctcgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
ccactttctgc aaatgagaat agcactgttt tgccttcac caccagctcc 300
agctccgatg gcaacctcgc tccggaagcc atcactgcta tcatcgttgt 350
cttctcctc ttggtcgcct tgctcctggc tgtggggctg gcaactgttg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccgcccagt 450
agcgaggagc agttctccca tgcagccgag gcccgggccc ctccaggactc 500
caaggagacg gtgcagggtt gcctgcccat ctaggteccc tctcctgcac 550
ctgtctcctc tcattgtgtg gtgaccttgg ggaaggcag tgcctctctc 600
gggcagtcag atccaccag tgcttaatag cagggaagaa ggtacttcaa 650
agactctgcc cctgaggtea agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

Met	Ala	Asn	Pro	Gly	Leu	Gly	Leu	Leu	Leu	Ala	Leu	Gly	Leu	Pro
1				5						10				15
Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr
				20					25					30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser
				35					40					45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile
				50					55					60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly
				65					70					75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu
				80					85					90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala
				95					100					105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys
				110					115					120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376
aatatatcat ctattttatca ttaatcaata atgtattctt ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
ttctgtcacc tattattatt gttggtatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaattggcta ctttctatca agaaataaag 200
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga ggggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatataca ataaggtaa 450
attataagta cctatgcag ttggctggac agttctaaa tggactttat 500
taatttttaa aatcagtaac tgattttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaagg aaagaaggga aaatgttgcc 700
agggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
Met Thr Phe Phe Leu Ser Leu Leu Leu Leu Val Cys Glu Ala
1 5 10 15
Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
 tgaataataa tggctttgaa gatattgtca ttgttataga tcctagtgtg 150
 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250
 tatctataat aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
 ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
 actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
 agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450
 caaaatgaat atggaccacc aggcaaaactg tttgtccatg agtgggctca 500
 cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550
 gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600
 ggtagaaata gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
 atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
 ttctgataa agtacaaca gaaaaagcat ccataatgtt tatgcaaatg 750
 attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
 tccaagccta caaaacataa agtgcaattt tagaagtaca tggggagtga 850
 ttagcaattc tgaggatttt aaaaacacca taccatggt gacaccacct 900
 cctccacctg tcttctcatt gctgaagatc agtcaaaaga ttgtgtgctt 950
 agttcttgat aagtctggaa gcattggggg taaggaccgc ctaaatcgaa 1000
 tgaatcaagc agcaaaacat ttctgctgct agactgttga aaatggatcc 1050
 tgggtgggga tggttcactt tgatagtact gccactattg taaataagct 1100
 aatccaaata aaaagcagtg atgaagaaa cacactcatg gcaggattac 1150
 ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200
 tttcaggatg ttggagagct acattcccaa ctcgatggat ccgaagtact 1250
 gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300
 tgaacaaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350
 gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400
 tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450
 ttacatcagg aaatactgat ctctoccaga agtcacctca gctogaaagt 1500
 aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550
 tgatagtaca tggggaaagg acacgttctt tctcatcaca tggaaacgtc 1600
 tgccctccag tatttctctc tgggatecca gtggaacaat aatggaaaa 1650

ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700
 tgcaaagggtg ggcacttggg catacaatct tcaagccaaa gcgaaccag 1750
 aaacattaac tattacagta acttctcgag cagcaaatc tctgtgctt 1800
 ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900
 gagccaatgt gactgcttcc attgaatcac agaattggaca tacagaagtt 1950
 ttggaaacttt tggataatgg tgcaggcgct gattctttca agaattgatg 2000
 agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050
 taaaagttcg ggctcatgga ggagcaaaaca ctgccaggct aaaattacgg 2100
 cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150
 aattgaagca aacccgccaa gacctgaat tgatgaggat actcagacca 2200
 ccttgaggga ttctagccga acagcatccg gaggtgcatt tgtggtatca 2250
 caagtcccaa gccttccctt gcctgaccaa taccaccaa gtcaaatcac 2300
 agacctgat gccacagttc atgaggataa gattattctt acatggacag 2350
 caccaggaga taattttgat gttggaaaag ttcaacgta tatcataaga 2400
 ataagtgcga gtattcttga tctaagagac agttttgatg atgctcttca 2450
 agttaaatact actgatctgt caccaaaagg ggccaactcc aaggaaaagct 2500
 ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatat 2550
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600
 cattgcacaa gtaactttgt ttatccctca agcaaatcct gatgacattg 2650
 atctacacc tactctact cctactccta ctctgataa aagtataat 2700
 tctggagtta atattttctac gctggtattg tctgtgattg ggtctgtgt 2750
 aattgttaac ttatttttaa gtaccaccat ttgaacctta acgaagaaaa 2800
 aaatcttcaa gtagacctag aagagagttt taaaaaaca aacaatgtaa 2850
 gtaaaggata ttctgtaac ttaaaattca tcccatgtgt gatcataaac 2900
 tcataaaaat aattttaaga tgtcgaaaa ggatactttg attaaataaa 2950
 aacactcatg gatattgtaa aactgtcaag attaaaattt aatagtttca 3000
 tttatttgtt attttatttg taagaaatag tgatgaacaa agatcctttt 3050
 tcatactgat acctgggtgt atattatttg atgcaacagt tttctgaaat 3100
 gatatttcaa attgcatcaa gaaattaaaa tcatctatct gagtagtaa 3150
 aatacaagta aaggagagca aataaacaac atttggaaaa aaaaaaaaaa 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

Met	Gly	Leu	Phe	Arg	Gly	Phe	Val	Phe	Leu	Leu	Val	Leu	Cys	Leu
1				5					10					15
Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly
				20					25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
				35					40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
				50					55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
				80					85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
				95					100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
				155					160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
				170					175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
				185					190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
				215					220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
				230					235					240
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His
				245					250					255
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg
				260					265					270
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

	275		280		285
Ile Pro Met Val	Thr Pro Pro Pro Pro	Pro Val Phe Ser Leu Leu			
	290	295			
Lys Ile Ser Gln	Arg Ile Val Cys Leu	Val Leu Asp Lys Ser Gly			
	305	310			
Ser Met Gly Gly	Lys Asp Arg Leu Asn	Arg Met Asn Gln Ala Ala			
	320	325			
Lys His Phe Leu	Leu Gln Thr Val Glu	Asn Gly Ser Trp Val Gly			
	335	340			
Met Val His Phe	Asp Ser Thr Ala Thr	Ile Val Asn Lys Leu Ile			
	350	355			
Gln Ile Lys Ser	Ser Asp Glu Arg Asn	Thr Leu Met Ala Gly Leu			
	365	370			
Pro Thr Tyr Pro	Leu Gly Gly Thr Ser	Ile Cys Ser Gly Ile Lys			
	380	385			
Tyr Ala Phe Gln	Val Ile Gly Glu Leu	His Ser Gln Leu Asp Gly			
	395	400			
Ser Glu Val Leu	Leu Leu Thr Asp Gly	Glu Asp Asn Thr Ala Ser			
	410	415			
Ser Cys Ile Asp	Glu Val Lys Gln Ser	Gly Ala Ile Val His Phe			
	425	430			
Ile Ala Leu Gly	Arg Ala Ala Asp Glu	Ala Val Ile Glu Met Ser			
	440	445			
Lys Ile Thr Gly	Gly Ser His Phe Tyr	Val Ser Asp Glu Ala Gln			
	455	460			
Asn Asn Gly Leu	Ile Asp Ala Phe Gly	Ala Leu Thr Ser Gly Asn			
	470	475			
Thr Asp Leu Ser	Gln Lys Ser Leu Gln	Leu Glu Ser Lys Gly Leu			
	485	490			
Thr Leu Asn Ser	Asn Ala Trp Met Asn	Asp Thr Val Ile Ile Asn			
	500	505			
Ser Thr Val Gly	Lys Asp Thr Phe Phe	Leu Ile Thr Trp Asn Ser			
	515	520			
Leu Pro Pro Ser	Ile Ser Leu Trp Asp	Pro Ser Gly Thr Ile Met			
	530	535			
Glu Asn Phe Thr	Val Asp Ala Thr Ser	Lys Met Ala Tyr Leu Ser			
	545	550			
Ile Pro Gly Thr	Ala Lys Val Gly Thr	Trp Ala Tyr Asn Leu Gln			
	560	565			
Ala Lys Ala Asn	Pro Glu Thr Leu Thr	Ile Thr Val Thr Ser Arg			
	575	580			
Ala Ala Asn Ser	Ser Val Pro Pro Ile	Thr Val Asn Ala Lys Met			

	590		595		600
Asn Lys Asp Val	Asn Ser Phe Pro Ser	Pro Met Ile Val Tyr	Ala		
	605		610		615
Glu Ile Leu Gln	Gly Tyr Val Pro Val	Leu Gly Ala Asn Val	Thr		
	620		625		630
Ala Phe Ile Glu	Ser Gln Asn Gly His	Thr Glu Val Leu Glu	Leu		
	635		640		645
Leu Asp Asn Gly	Ala Gly Ala Asp Ser	Phe Lys Asn Asp Gly	Val		
	650		655		660
Tyr Ser Arg Tyr	Phe Thr Ala Tyr Thr	Glu Asn Gly Arg Tyr	Ser		
	665		670		675
Leu Lys Val Arg	Ala His Gly Gly Ala	Asn Thr Ala Arg Leu	Lys		
	680		685		690
Leu Arg Pro Pro	Leu Asn Arg Ala Ala	Tyr Ile Pro Gly Trp	Val		
	695		700		705
Val Asn Gly Glu	Ile Glu Ala Asn Pro	Pro Arg Pro Glu Ile	Asp		
	710		715		720
Glu Asp Thr Gln	Thr Thr Leu Glu Asp	Phe Ser Arg Thr Ala	Ser		
	725		730		735
Gly Gly Ala Phe	Val Val Ser Gln Val	Pro Ser Leu Pro Leu	Pro		
	740		745		750
Asp Gln Tyr Pro	Pro Ser Gln Ile Thr	Asp Leu Asp Ala Thr	Val		
	755		760		765
His Glu Asp Lys	Ile Ile Leu Thr Trp	Thr Ala Pro Gly Asp	Asn		
	770		775		780
Phe Asp Val Gly	Lys Val Gln Arg Tyr	Ile Ile Arg Ile Ser	Ala		
	785		790		795
Ser Ile Leu Asp	Leu Arg Asp Ser Phe	Asp Asp Ala Leu Gln	Val		
	800		805		810
Asn Thr Thr Asp	Leu Ser Pro Lys Glu	Ala Asn Ser Lys Glu	Ser		
	815		820		825
Phe Ala Phe Lys	Pro Glu Asn Ile Ser	Glu Glu Asn Ala Thr	His		
	830		835		840
Ile Phe Ile Ala	Ile Lys Ser Ile Asp	Lys Ser Asn Leu Thr	Ser		
	845		850		855
Lys Val Ser Asn	Ile Ala Gln Val Thr	Leu Phe Ile Pro Gln	Ala		
	860		865		870
Asn Pro Asp Asp	Ile Asp Pro Thr Pro	Thr Pro Thr Pro Thr	Pro		
	875		880		885
Thr Pro Asp Lys	Ser His Asn Ser Gly	Val Asn Ile Ser Thr	Leu		
	890		895		900
Val Leu Ser Val	Ile Gly Ser Val Val	Ile Val Asn Phe Ile	Leu		

Ser Thr Thr Ile

<210> 380
 <211> 3877
 <212> DNA
 <213> Homo sapiens

<400> 380
 ctcccttaggt ggaaaccctg ggagtagagt actgacagca aagaccggga 50
 aagaccatac gtcccccggc aggggtgaca acaggtgtca tctttttgat 100
 ctctgtgtgt gctgccttcc tatttcaagg aaagacgccca aggtaatttt 150
 gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200
 ccccgattat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250
 gtcctcttgcg cttaacttgt ggttgaggga gagaaccttt gtggggctgc 300
 gttctcttag cagtgcctcag aagtgacttg cctgagggtg gaccagaaga 350
 aaggaaagggt cccctcttgc tgttggtctgc acatcaggaa ggctgtgatg 400
 ggaatgaagg tgaaaaacttg gagatttcac ttcagtcatt gctctgtcct 450
 gcaagatcat cttttaaag tagagaagct gctctgtgtg gtggttaact 500
 ccaaggagca gaactcgctc tagaaggaaa tggatgcaag cagctccggg 550
 ggccccaac gcatgcttcc tgttgtctag ccagggaag cccttccgtg 600
 ggggccccg ctttgaggga tgccaccgtg tctggacgca tggctgattc 650
 ctgaatgatg atggttcgcc gggggctgct tgcgtggatt tcccgggtgg 700
 tggttttgct ggtgctcctc tgctgtgcta tctctgtcct gtacatgttg 750
 gcctgcaccc caaaaggta cgaggagcag ctggcactgc ccagggccaa 800
 cagccccacg gggaaggagg ggtaccaggc cgtccttcag gagtgggagg 850
 agcagcaccg caactacgtg agcagcctga agcggcagat cgcacagctc 900
 aaggaggagc tgcaaggagag gagtgcagcag ctccaggaat ggcaagtacca 950
 agccagcgat gctgctggcc tgggtctgga caggagcccc ccagagaaaa 1000
 cccaggccga cctcctggcc ttcctgcact cgcaggtgga caaggcagag 1050
 gtgaatgctg gcgtcaagct ggccacagag tatgcagcag tgcctttcga 1100
 tagctttact ctacagaagg tgtaccagct ggagactggc cttaccgcc 1150
 accccagga gaagcctgtg aggaaggaca agcgggatga gttggtggaa 1200
 gccattgaat cagccttga gacctgaac aatcctgcag agaacagccc 1250
 caatcacgct ccttacacgg cctctgattt catagaaggg atctaccgaa 1300

cagaaaggga caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350
aaacacgaat tcaaacggct catcttattt cgaccattca gccccatcat 1400
gaaagtgaat aatgaaaagc tcaacatggc caacacgctt atcaatgtta 1450
tcgtgcctct agcaaaaagg gtggacaagt tccggcagt catgcagaat 1500
ttcagggaga tgtgcattga gcaggatggg agagtccatc tcaactgtgt 1550
ttactttggg aaagaagaaa taaatgaagt caaaggaata cttgaaaaca 1600
cttccaaagc tgccaacttc aggaacttta ccttcattca gctgaatgga 1650
gaattttctc ggggaaaggg acttgatgtt ggagcccgct tctggaaggg 1700
aagcaacgct cttctctttt tctgtgatgt ggacatctac ttcacatctg 1750
aattcctcaa tacgtgtagg ctgaatacac agccagggaa gaaggtattt 1800
tatccagttc ttttcagtca gtacaatcct ggacataat acggccacca 1850
tgatgcagtc cctcccttgg aacagcagct ggtcataaag aaggaaactg 1900
gattttggag agactttgga ttgggatga cgtgtcagta tcggtcagac 1950
ttcatcaata taggtgggtt tgatctggac atcaaaggct ggggcggaga 2000
ggatgtgcac ctttatcgca agtatctcca cagcaacctc atagtggtag 2050
ggacgcctgt gcgaggactc ttccacctct ggcatgagaa gcgctgcattg 2100
gacgagctga ccccagagca gtacaagatg tgcatgcagt ccaaggccat 2150
gaacgaggca tcccacggcc agctgggcat gctggtgttc aggcacgaga 2200
tagaggctca ctttcgcaaa cagaaacaga agacaagtag caaaaaaaca 2250
tgaactccca gagaaggatt gtgggagaca cttttctttt ctttttgcaa 2300
ttactgaaag tggctgcaac agagaaaaga cttccataaa ggacgacaaa 2350
agaattggac tgatgggtca gagatgagaa agcctccgat ttctctctgt 2400
tgggcttttt acaacagaaa tcaaatcttc cgctttgctt gcaaaagtaa 2450
cccagttgca ccctgtgaag tgtctgacaa aggcagaaatg cttgtgagat 2500
tataagccta atggtgtgga ggttttgatg gtgtttacaa tcaactgaga 2550
cctgtgtttt tgtgtgtcca ttgaaatatt catgatttaa gagcagtttt 2600
gtaaaaaatt cattagcatg aaaggcaagc atatttctcc tcatatgaat 2650
gagcctatca gcagggtctt agtttctagg aatgctaaaa tatcagaagg 2700
caggagagga gataggctta ttatgatact agtgagtaca ttaagtaaaa 2750
taaaatggac cagaaaaaga aagaacccat aaatatcgtg tcatattttc 2800
cccaagatta accaaaaata atctgcttat ctttttggtt gtccttttaa 2850
ctgtctcgtt ttttttcttt tatttaaaaa tgcacttttt ttcccttggt 2900

agttatagtc tgcttattta attaccactt tgcaagcctt acaagagagc 2950
 acaagttggc ctacattttt atatttttta agaagatact ttgagatgca 3000
 ttatgagaac ttctagtcca aagcatcaaa ttgatgccat atccaaggac 3050
 atgccaaatg ctgattctgt caggcactga atgtcaggca ttgagacata 3100
 gggaaggaaat ggtttgtact aatacagacg tacagatact ttctctgaag 3150
 agtattttcg aagaggagca actgaacact ggaggaaaag aaaatgacac 3200
 ttctgtcttt acagaaaagg aaactcattc agactgggtga tatogtgatg 3250
 tacctaaaag toagaaaacca cattttctcc toagaagtag ggaccgcttt 3300
 cttacctgtt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350
 ttctaaaaca ggggtctcct cctggcttct ggcttcata agaagaaatg 3400
 gagaaaaata tatatatata tatatatatt gtgaaagato aatocatctg 3450
 ccagaatcta gtgggatgga agtttttgc acatgttato caccocaggc 3500
 cagggtggaag taactgaatt attttttaa ttaagcagtt ctactcaatc 3550
 accaagatgc ttctgaaaat tgcattttat taccatttca aactattttt 3600
 taaaaataaa tacagttaac atagagtggg ttcttcatto atgtgaaaat 3650
 tattatgccag caccagatgc atgagcta atctctcttg agtccctgct 3700
 tctgtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750
 gctgttggtg tgtaaaaaa tgcattgtat tgattgtac tggtagttta 3800
 tgaaatttaa ttaaacaca ggccatgaat ggaaggtggg attgcacagc 3850
 taataaaaata tgatttgtg atatgaa 3877

<210> 381
 <211> 532
 <212> PRT
 <213> Homo sapiens

<400> 381
 Met Met Met Val Arg Arg Gly Leu Leu Ala Trp Ile Ser Arg Val
 1 5 10 15
 Val Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr
 20 25 30
 Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu
 35 40 45
 Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val
 50 55 60
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu
 65 70 75
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser
 80 85 90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	95	100	105
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	110	115	120
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	125	130	135
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	140	145	150
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	155	160	165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	170	175	180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	185	190	195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	200	205	210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	215	220	225
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	230	235	240
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	245	250	255
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	260	265	270
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	275	280	285
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	290	295	300
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	305	310	315
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	320	325	330
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	335	340	345
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	350	355	360
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	365	370	375
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	380	385	390
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	395	400	405

Glu Gln Gln Leu Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp
 410 415 420
 Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp Phe Ile Asn
 425 430 435
 Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly Glu Asp
 440 445 450
 Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val Val
 455 460 465
 Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Glu Lys Arg
 470 475 480
 Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln
 485 490 495
 Ser Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu
 500 505 510
 Val Phe Arg His Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln
 515 520 525

Lys Thr Ser Ser Lys Lys Thr
 530

<210> 382
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 382
 ctcggggaaa gggacttgat gttgg 25

 <210> 383
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 383
 gcgaagggtga gacctatct cgtgcc 26

 <210> 384
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 384
 cagcctacac gtattgagg 19

 <210> 385
 <211> 48
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

gagtcagtac aatcctggca taatatacgg ccaccatgat gcagtgccc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgcca ttcattgctga 50
actctgtcaa ccagggtgcag aaaatgcttt taaagtgaga cttagtatca 100
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150
ctcttcaaag cgatggtagc tttctccatg agaaaagtcc ccaacagaga 200
agcaacagaa atttcccatg tcctactttg caatgtaacc cagagggtat 250
cattctggtt tgtggttaca gacccttoaa aaaatcacac ccttctgct 300
gttgagggtc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350
cttctttcta aatgacccaa ctctggaatt tttaaaaatc ccttccacac 400
ttgaccacc catggacca tctgtgcca tctggattat tatatttgg 450
gtgatatttt gcatcatcat agttgcaatt gcaactactga ttttatoagg 500
gatctggcaa cgtagaagaa agaacaaaga accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaaac atgatcacia ttgaaaatgg catcccctct 600
gatcccctgg acatgaaggg gggcatatta atgatgcctt catgacagag 650
gatgagaggg tcacccctct ctgaagggtt gttgttctgc ttcctcaaga 700
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750
gcagatcata ttttttgtt caccattctt cttttgtaat aaattttgaa 800
tgtgcttgaa agtgaaaagc aatcaattat acccaccac accactgaaa 850
tcataagcta ttcacgactc aaaatattct aaaaattttt tctgacagta 900
tagtgataaa atgtggctcat gtggtatttg tagttattga ttttaagcatt 950
tttagaata agatcaggca tatgtatata ttttcacact tcaagacct 1000
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050
tcattgaaaa tggatccctt ttgacgatca ottatatoc totgtatatg 1100
actaagtaaa caaaagtggag aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata ttttttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt totacaattt gtaaaagtc aatctgtgct aacttaataa 1300
 agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 387
 Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu
 1 5 10 15
 Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser
 20 25 30
 Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn
 35 40 45
 Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys
 50 55 60
 Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys
 65 70 75
 Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro
 80 85 90
 Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
 95 100 105
 Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
 110 115 120
 Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro
 125 130 135
 Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile
 140 145 150
 Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly
 155 160 165
 Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp
 170 175 180
 Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly
 185 190 195
 Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met
 200 205 210

Pro Ser

<210> 388
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 388
 aactcaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccggagt 50

ggcttgga ggggttgga gccctcggtc tgccccgtcc ggtctctggg 100
 gccaaagctg ggtttccctc atgtatggca agagctctac tcgtgcgggtg 150
 cttctctctc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggtg tgetggaggc tgtaaatggg acagatgctc 250
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgetctaaca 300
 gtgacctgga atttctgtcc tctagacggg ggacctgagc agtttgattt 350
 ctactaccac atagatccct tccaacccat gagtgggagg ttaaggacc 400
 ggggtgtctg ggtggggaat cctgagcggg acgatgctcc catccttctc 450
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500
 cccacctgat gttgatgggg tgatagggga gatccggtcc agcgtcgtgc 550
 acactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600
 gcctgtgcac tgatgatcat aatagtaatt gtagtggctc tctccagca 650
 ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
 aatcaaaaga agaggaaagg ctcaaccaag agaaaaagtg ctcgttttat 750
 ttagaagaca cagactaaca attttagatg gaagctgaga tgatttccaa 800
 gaacaagaac cctagtattt cttgaagtta atggaaactt tctcttggct 850
 tttccagttg tgaccogttt tccaaccagt totgcagcat attagattct 900
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950
 gtcatacaca gcctcattat taaggtctta ttaatttca gagtgtaaa 1000
 tttttcaagt gctcattag ttttataaac aagaagctac atttttgcc 1050
 ttaagacact acttacagt tttatgactg tatacacata tattggtatc 1100
 aaaggggata aaagccaatt tgtctgttac atttcttctc acgtatttct 1150
 tttagcagca cttctgtctac taaagttaat gtgtttactc tcttctctc 1200
 ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
 acagtaaatc cttaaattca actgttaaat gacattttta tttttatgct 1300
 tctccttaac tatgagacac atcttgtttt actgaatttc tttcaattat 1350
 ccagtgata gatttttgc g 1371

<210> 389
 <211> 215
 <212> PRT
 <213> Homo sapiens

<400> 389
 Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Leu Gly
 1 5 10 15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctgaggcca gaggc 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gaggc 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagtcttt 50
 agcagtctctg gtaactcttg gagtttccat ctttctggto tctgcccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccaactgcgc 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctccta 250
 aagacattcc agttttacc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tctgtgatt tcatccaact acttaccttg cctacgatat 400
 cccctttatc tctaatacgt ttattttctt tcaataaaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
 1 5 10 15
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 395
 gtcacctgat ctcatgtca ccacc 25

 <210> 396
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 396
 cagggacaca ctctaccatt cgggag 26

 <210> 397
 <211> 42
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 397
 ccattcttct ggtctctgcc cagaatccga caacagctgc tc 42

 <210> 398
 <211> 907
 <212> DNA
 <213> Homo sapiens

 <400> 398
 ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtgggtcc 50
 aaccttggac ccttaggggt ctggatttgc tggtaacaa gataacctga 100
 gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
 gtgttcaagg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
 ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250
 ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300
 gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350
 ggccagtgca ggggtggggg cggcaaacac cataaagaac cagaggggtct 400
 gggccccggc cacagagtca tctgccagc tctctctgctg ctggccagtg 450
 ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500
 gctgcgggc catggtccct gtctagggca gcaattctca accttcttgc 550
 tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
 agcaattaaa actgagaaat gggccgggca cgggtggtca cgcctgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcaactg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccacag aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
 gtcatgccag tgctgtctct gtgctgtctc tgggccctgg caatggtgac 50
 ccggcctgcc tcagcgccc ccattggcgg cccagaactg gcacagcatg 100
 aggagctgac cctgtcttct catgggaccc tgcagctggg ccaggccctc 150
 aacgggtgtg acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggcccggg tgcagcccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggt gccacggcac agaaggtgct acgggacagc gtgcagcgcc 400

tagaagtcca gctgaggagc gcttggtg gcccgccta ccgagaattt 450
 gaggtcttaa aggtctcacgc tgacaagcag agccacatcc tatgggcccc 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgcccgctga ggcctctgtg caggaggagg ctgctgtgtc actgggatca 700
 gccagggcgc cgggcccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtgccccat tggggagggg tggaggaagg 800
 acatgtatcc ttctatgcct acacaccct cattaaagca gagtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
 1 5 10 15
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
 ggcaacatgg ctcagcaggc ttgccccaga gccatggcaa agaattggact 50
 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
 acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
 tgccttgaa gaaattcaag cctgcagac agtctgtctc cgaggcacta 250
 aagttcaca gaaatgctac ctgtctcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg cctccaaga ctatggtaaa aggagcctgc 400
 cagggtgcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450
 aagtttgttg agtcaacgg aatcgctatc tccttctcta actgggacgc 500
 tgcaacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggtc ttcttccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
 tgcccttctc ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900
 tcactgttac aaaccaggtt tgttttcaca aaatcacagt agcaatgcaa 950
 ctcacactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
 aggtgctata taatocaaaa acttttcagc ctgttgctca ttctgtccca 1100
 tgctggcaat aataccttgt cagccatta cccttatttt gaattgtoc 1150
 atctcctggt gggacttgta tctgtotgc catatcagaa cacaacccc 1200
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatttg 1300

atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350
 accctaaggc atatacaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaaagaacct acatttatatt tgcttttagca tcoctactct caccttttat 1450
 gagattgaga gtggacttac atttcocttt ttacattttc gtatatttat 1500
 tttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550
 tggaagctga aaactgaatt taaagaatgc tatcttgga aattgcatac 1600
 gtctgtgcaa ttttttatc tgcttagtgc tattctgctt gtttaactag 1650
 attgtacaaa ataactcat tgcttaatat caaattacaa agtttagact 1700
 tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750
 ctcaaatata atagtgttta aacattgaat gtgttttggt aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagtgttt 1850
 tcattgtcga ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 403
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
 1 5 10 15
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr
 20 25 30
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
 35 40 45
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
 50 55 60
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
 65 70 75
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
 80 85 90
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
 95 100 105
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
 110 115 120
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
 125 130 135
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
 140 145 150
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

155	160	165
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser		
170	175	180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser		
185	190	195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys		
200	205	

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctggttatc cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacaggc ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggta aaaggagcct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50
 ttccccgcgc gccccgagcc cccgcgccat gaagctcgcc gcctcctgg 100
 ggctctgcgt ggccctgtcc tgcagctccg ctgctgcttt ctagtgggc 150
 tcggccaagc ctgtggccca gcctgtcgct gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaaccccct cggcacccct aacccgctga 250
 agctcctgct gaggcgcctg ggcacccccg tgaaccacct catagagggc 300
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg ggcccgtaga 350

ggccctgaag gccctgctgg gggccctgac agtggtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggtga 450
 aaaccccgcc gcggggagga cgtccatcc ccttcccccg gccctctca 500
 ataaactgtg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 408
 Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys
 1 5 10 15
 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
 20 25 30
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
 35 40 45
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
 50 55 60
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
 65 70 75
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
 80 85 90
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
 95 100

<210> 409
 <211> 2089
 <212> DNA
 <213> Homo sapiens

<400> 409
 tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50
 aaggagggca ctctctggcc tccgcagccg atcacatgaa ggtgggtgcca 100
 agtctctctgc tctccgtctc cctggcacag gtgtggcttg taccggctt 150
 ggcccccagt cctcagtgc cagagacccc agcccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tgccacagcag 300
 gcagcagctt gccaaaggaga cttcaaaact cggattcagc ctgctgcgaa 350
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400
 tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtctc acttgacagg cctgaagccc accaagcccc 500

ggctcctgcc ttccctcttt aagggactca gagagaccct ctcccgcaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcaccc acaaggattt 600
 tgatgtcaaa gagactttct tcaatttato caagaggat tttgatacac 650
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattct tgtggattac atctgtttca 800
 aagggaatg gttgacccca tttgacctg tcttcacga agtcgacact 850
 ttccacctgg acaagtacaa gaccattaag gtgcccatga tgtacgggtg 900
 aggcaagttt gcctccacct ttgacaagaa ttttcgttgt catgtcctca 950
 aactgcccta ccaaggaaat gccaccatgc tgggtgtcct catggagaaa 1000
 atgggtgacc acctcgccct tgaagactac ctgaccacag acttggtgga 1050
 gacatggctc agaaacatga aaaccagaaa catggaagtt tcttttccga 1100
 agttcaagct agatcagaag tatgagatgc atgagctgct taggcagatg 1150
 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200
 tactggaaga aatctccaag tatccagggt ttaacgaaga acagtgtgtg 1250
 aagttgatga aaggggcact gaggcagtg caggaatctt gtcagaaatt 1300
 actgcttatt ccatgcctcc tgtcatcaaa gtggaccggc catttcatat 1350
 catgatctat gaagaaacct ctggaatgct tctgtttctg ggcagggtgg 1400
 tgaatccgac tctctataa ttcaggacat gcataagcac ttctgtgtgt 1450
 agtagatgct gaatctgagg tatcaaacac acacaggata ccagcaatgg 1500
 atggcagggg agagtgttcc tttgtttctt aactagttta ggggtgtctc 1550
 aaataaaatc agtagtcccc acttatctga gggggataca ttcaaaagacc 1600
 cccagcagat gcctgaaaac gtggacagtg ctgaacctta tatatatatt 1650
 ttctacacac tacataccta tgataaagtt taatttataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttacttgaac 1750
 gcaagcactg caataccata acagtcaaac tgattataga gaaggctact 1800
 aagtgactca tgggcgagga gcatagacag tgtggagaca ttggccaagg 1850
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaaatttt catttaatgt ttttggacca tggttgacca tggtaactg 2000
 agactgcaga aagcaaaacc atggataaag gaggactact acaaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
1				5					10					15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn
				215					220					225
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
 ctgggatcag ccaactgcagc tccctgagca ctctctacag agacgcggac 50
 cccagacatg aggaggctcc tcttggtcac cagcctggtg gttgtgctgc 100
 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact gccctcaga gcaggaccca gagaaggcct ggggcgcccg 200
 tgtgtgtgag cctccggaga aggacgacca gctggtggtg ctgttccctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggcccca tcttcacagg caccaaggcc tggatggaga ccgaggacac 350
 cctggggcgt gtctctgagtc ccgagccoga ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaataccc agtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met	Arg	Arg	Leu	Leu	Leu	Val	Thr	Ser	Leu	Val	Val	Val	Leu	Leu
1				5					10					15
Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
			20						25					30
Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
			35						40					45
Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
			50						55					60
Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
			65						70					75
Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
			80						85					90
Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
			95						100					105
Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
			110						115					120
Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
			125						130					135
Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
			140						145					150
Gln														

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

agaaagctgc actctgttga gctccagggc gcagtgaggagg gagggagtga 50
aggagctctc tgtacccaag gaaagtcgag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tggtatctac 300
cagacottct gtgacatgac ctctgggggt ggcggctgga ccctggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacgggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaaact acaacacctt tggatctgca gagcgcgcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtacc gcacggacac tggcttctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa ggaagtgtt 700
 ggactgacaa cgcccggtg atccctgtgg tctatgattt tggcgagcc 750
 cagaaaacag catcttatta ctcacctat ggccagcggg aattactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgagggtc accggatgta aactagagca tcaactgatt 900
 ggtggaggag gatactttcc agaggccagt cccagcagct gtggagattt 950
 ttctgtgttt gattggagtg gatattgaac tcatgttgtt tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagattt 1050
 tgtggggagg aaccagacc tctctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 414
 Met Asn Gln Leu Ser Phe Leu Leu Phe Leu Ile Ala Thr Thr Arg
 1 5 10 15
 Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr
 20 25 30
 Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys
 35 40 45
 Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr
 50 55 60
 Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly
 65 70 75
 Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met
 80 85 90
 Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly
 95 100 105
 Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr
 110 115 120
 Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys

	125		130		135
Asn Pro Gly Tyr	Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile	Trp		
	140	145	150		
His Val Pro Asn	Lys Ser Pro Met Gln	His Trp Arg Asn Ser	Ser		
	155	160	165		
Leu Leu Arg Tyr	Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu	Gly		
	170	175	180		
His Asn Leu Phe	Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr	Gly		
	185	190	195		
Glu Gly Lys Cys	Trp Thr Asp Asn Gly	Pro Val Ile Pro Val	Val		
	200	205	210		
Tyr Asp Phe Gly	Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser	Pro		
	215	220	225		
Tyr Gly Gln Arg	Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg	Val		
	230	235	240		
Phe Asn Asn Glu	Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met	Arg		
	245	250	255		
Val Thr Gly Cys	Asn Thr Glu His His	Cys Ile Gly Gly Gly	Gly		
	260	265	270		
Tyr Phe Pro Glu	Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser	Gly		
	275	280	285		
Phe Asp Trp Ser	Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser	Ser		
	290	295	300		
Arg Glu Ile Thr	Glu Ala Ala Val Leu	Leu Phe Tyr Arg			
	305	310			

<210> 415
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 415
 gcggagccgg cgccggctgc gcagaggagc cgctctcgcc gccgccacct 50
 cggtggggag ccacgaggc tgcgcacatc tgccctcgga acaatgggac 100
 tcggcgcgcg aggtgcttgg gccgcgctgc tcctggggac gctgcagggtg 150
 ctacgctgc tgggggcgcg ccatgaaagc gcagccatgg cgcatctgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgt aactcaacag 250
 agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300
 actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350
 caccacocatg aaacctacag cggcatctaa tacaacaaca ccagggatgg 400
 tctacaacaa tatgacttct accaccttaa agtctacacc caaacaaca 450
 agtggtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
gttgggtgga ttgtattaac gctgggagtt ttatctattc tttacattgg 650
atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaaacag 750
attgatgctg cctatcaat taattttggt ttattaatag tttaaaacaa 800
tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850
gtattacgta aatatgtaaa gattottcaa ggtaacaagg gtttgggttt 900
tgaataaacc atctggatct tatagaccgt tcatacaatg gttttagcaa 950
gttcatagta agacaaacaa gtctatcttt ttttttttgg ctgggtggg 1000
ggcattggtc acatatgacc agtaattgaa agacgtcacc actgaaagac 1050
agaatgcat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100
tttgggtatc tttttagtct cacataaaga acttcagtgc ttttcagagc 1150
tggtatatgc ttaattacta atgccacaca gaaattatac aatcaacta 1200
gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416
<211> 208
<212> PRT
<213> Homo sapiens

<400> 416
Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly
1 5 10 15
Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala
20 25 30
Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His
35 40 45
Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser
50 55 60
Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr
65 70 75
Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys
80 85 90
Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr
95 100 105
Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser
110 115 120
Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140		145		150
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155		160		165
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170		175		180
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185		190		195
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200		205		

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
 cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccca 50
 gccgggagcc ggtcgcgagg gctccgggct gtgggaccgc tggggcccca 100
 gcgatggcga ccctgtgggg aggccttctt cggtttggct ccttgctcag 150
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200
 ccgccaagaa ttctgaggat gtcagatgta aatgtatctg cctccctat 250
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaagattg 300
 tgattgcctt catgtttgtg agcccatgcc tgtcgggggg cctgatgtag 350
 aagcactactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450
 tctgtacatg gtatatctta ctctggttga gccatactg aagaggcgcc 500
 tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
 tccaagaca gcgaaagtct gtctttgacc ggcatgtgtt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
 agaactgact gggttttgct gggtttcatt ttaataacct gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaaact tgccttgattt 850
 tttttctctg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
 aaagtacgcc aataagtctt ttcctatttg tgacttttac taataaaaat 950
 aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
 ttgtgtgttg ttgttttttg ttgttttggt ttggtgggag agggggaggga 1100
 tgccctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150
 ttttgtaaat agaccttacc ttctattttc gaggtttcatt tataatttgc 1200
 agtgtagcca gcoctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcac ggtaaacggg 1300
 atctaaaaat cctggtgggt tttcacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca ttgctagtt 1400
 tactctaaag actaaacata gtcttgggtg gtgtgggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaacccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cgtcgtggtg gagaggcagc tgtttgagct ccaatatgtg 1600
 cagccttgaa ctagggtcgg ggttgggtt gcoctctctg aaaggctctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

Met	Ala	Thr	Leu	Trp	Gly	Gly	Leu	Leu	Arg	Leu	Gly	Ser	Leu	Leu	1	5	10	15
Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu	20	25	30	
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile	35	40	45	
Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn	50	55	60	
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met	65	70	75	
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu	80	85	90	
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile	95	100	105	
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Tyr	Met	Val	110	115	120		
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly	125	130	135	

His Ala Gln Leu Ile Gln Ser Asp Asp Ile Gly Asp His Gln
 140 145 150
 Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg
 155 160 165
 Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys
 170 175 180
 Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val
 185 190 195
 Val Leu Ser

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccacctgag cagtcatggc gtactccaca gtgcagagag 50
 tcgctctggc ttctgggctt gtctggctc tgcgtgtgt gctgcccaag 100
 gccttcctgt cccgcgggaa gcggcaggag ccgcccga cacctgaagg 150
 aaaattgggc cgatttccac ctatgatgca tcatcaccag gccacctcag 200
 atggccagac tcctggggct cgtttccaga ggtctcacct tgcgaggca 250
 ttgcaaagg ccaaaggatc aggtggaggt gctggaggag gaggtagtgg 300
 aagaggctctg atggggcaga ttattccaat ctacggtttt gggatttttt 350
 tatatatact gtacattcta ttaaggtaa gtagaatcat cctaatacata 400
 ttacatcaat gaaaatctaa tatggcgata aaatcattg tctacattaa 450
 aacttattat agttcataaa attatttcaa atccatcacc tctttaaatc 500
 ctgcctcttc ttcgatgagg acttaggata gccattattt cagtttcaca 550
 taagaatgtt tactcaatgt ttaagtgttt tgccccaaaa ttoacaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtataca attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
 1 5 10 15
 Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
 20 25 30
 Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421
<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
cggtctgagt gcagctgtgg ggagatttca gtgcattgcc tccccgggt 50
gtctctcatc ttggatttga aagttgagag cagcatgttt tgcccactga 100
aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgccctga gctaacagtc catgtgggtg attcagctct 200
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggc tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
gccccaaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600
tcaggacggc gcgcaaagga ggagattgta tttcgttact accacaaact 650
caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
ggagtggagg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850
ctogaacact ggtgaccccg gcagccctga ggctctggt cttgggtggt 900
aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tcctgctgct 950
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050
 aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100
 ctccccata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150
 aatcagaggc cactacatg accatgcacc cagtttggcc ttctctgagg 1200
 tcagatcgga acaactcact tgaaaaaag tcaggtgggg gaatgccaaa 1250
 aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
 ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgtattc 1350
 agactccgc tctccagct gtctcctgt ctctattgtt ggtcaataca 1400
 ctgaagatgg agaatttggg gcctggcaga gagactggac agctctggag 1450
 gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
 acactggccc tggaaccag gctgagctga gtggcctcaa acccccgtt 1550
 ggatcagacc ctctgtggg caggggtctt agtggatgag ttactgggaa 1600
 gaatcagaga taaaaacaa cccaaatcaa 1630

<210> 422
 <211> 394
 <212> PRT
 <213> Homo sapiens

<400> 422
 Met Phe Cys Pro Leu Lys Leu Ile Leu Leu Pro Val Leu Leu Asp
 1 5 10 15
 Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu
 20 25 30
 Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln
 35 40 45
 Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
 50 55 60
 Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
 65 70 75
 Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
 80 85 90
 Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
 95 100 105
 Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
 110 115 120
 Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val
 125 130 135
 Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu
 140 145 150
 Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

	155		160		165
Thr Lys Val Glu	Trp Ile Phe Ser Gly	Arg Arg Ala Lys Glu	Glu		
	170	175	180		
Ile Val Phe Arg	Tyr Tyr His Lys Leu	Arg Met Ser Val Glu	Tyr		
	185	190	195		
Ser Gln Ser Trp	Gly His Phe Gln Asn	Arg Val Asn Leu Val	Gly		
	200	205	210		
Asp Ile Phe Arg	Asn Asp Gly Ser Ile	Met Leu Gln Gly Val	Arg		
	215	220	225		
Glu Ser Asp Gly	Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly	Asn		
	230	235	240		
Leu Val Phe Lys	Lys Thr Ile Val Leu	His Val Ser Pro Glu	Glu		
	245	250	255		
Pro Arg Thr Leu	Val Thr Pro Ala Ala	Leu Arg Pro Leu Val	Leu		
	260	265	270		
Gly Gly Asn Gln	Leu Val Ile Ile Val	Gly Ile Val Cys Ala	Thr		
	275	280	285		
Ile Leu Leu Leu	Pro Val Leu Ile Leu	Ile Val Lys Lys Thr	Cys		
	290	295	300		
Gly Asn Lys Ser	Ser Val Asn Ser Thr	Val Leu Val Lys Asn	Thr		
	305	310	315		
Lys Lys Thr Asn	Pro Glu Ile Lys Glu	Lys Pro Cys His Phe	Glu		
	320	325	330		
Arg Cys Glu Gly	Glu Lys His Ile Tyr	Ser Pro Ile Ile Val	Arg		
	335	340	345		
Glu Val Ile Glu	Glu Glu Glu Pro Ser	Glu Lys Ser Glu Ala	Thr		
	350	355	360		
Tyr Met Thr Met	His Pro Val Trp Pro	Ser Leu Arg Ser Asp	Arg		
	365	370	375		
Asn Asn Ser Leu	Glu Lys Lys Ser Gly	Gly Gly Met Pro Lys	Thr		
	380	385	390		
Gln Gln Ala Phe					

<210> 423
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 423
 ctatgaagaa gcttctctgga aaacaataag caaaggaaaa caaatgtgtc 50
 ccattctcaca tgggtctacc ctactaaaga caggaagatc ataaactgac 100
 agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150
 ctctgagctc agttgcagta ctogggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctctcgt ctccgttggc 250
 cctgcacctt cctcctggtg gcgtgtgatg gctttgatto tgctgatcct 300
 gtgcgtgggg atggttgtcg ggctggtggc tctggggatt tggctctgtca 350
 tgacagcgaa ttacctacaa gatgagaatg aaaatcgac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaaggct ataatgcag cccctgtgac acaaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcacaa cttaatatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtoga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactacotta atgcaaagag gtggacagga taacacagat 900
 aagggcttta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaaa aaa 963

<210> 424
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 424
 Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg
 1 5 10 15
 Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp
 20 25 30
 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val
 35 40 45
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn
 50 55 60
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln
 65 70 75
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu
 80 85 90
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn
 95 100 105
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
 110 115 120
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

	125		130		135									
Thr	Leu	Leu	Lys	Ile	Asp	Asn	Arg	Asn	Ile	Val	Glu	Tyr	Ile	Lys
				140					145					150
Ala	Arg	Thr	His	Leu	Ile	Arg	Trp	Val	Gly	Leu	Ser	Arg	Gln	Lys
				155					160					165
Ser	Asn	Glu	Val	Trp	Lys	Trp	Glu	Asp	Gly	Ser	Val	Ile	Ser	Glu
				170					175					180
Asn	Met	Phe	Glu	Phe	Leu	Glu	Asp	Gly	Lys	Gly	Asn	Met	Asn	Cys
				185					190					195
Ala	Tyr	Phe	His	Asn	Gly	Lys	Met	His	Pro	Thr	Phe	Cys	Glu	Asn
				200					205					210
Lys	His	Tyr	Leu	Met	Cys	Glu	Arg	Lys	Ala	Gly	Met	Thr	Lys	Val
				215					220					225

Asp Gln Leu Pro

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc toccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 428
 ccaccaatgg cagccccacc t 21

<210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 429
 gactgcccctc cctgccca 17

<210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 430
 caaaaagcct ggaagtcttc aaag 24

<210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 431
 cagctggact gcaggtgcta 20

<210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 432
 cagtgcgcac agcaagtgtc ct 22

<210> 433
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 433
 ggccacctcc ttgagtcttc agttccct 28

<210> 434
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 434
 caactactgg ctaaagctgg tgaa 24

 <210> 435
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 435
 cctttctgta taggtgatac ccaatga 27

 <210> 436
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 436
 tggccatccc taccagaggc aaaa 24

 <210> 437
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 437
 ctgaagacga cgcggtattac ta 22

 <210> 438
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 438
 ggcagaaatg ggaggcaga 19

 <210> 439
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 439
 tgctctgttg gctacggctt tagtcctag 30

 <210> 440
 <211> 22

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 440
 agcagcagcc atgtagaatg aa 22

 <210> 441
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 441
 aatacgaaca gtgcacgctg at 22

 <210> 442
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 442
 tccagagagc caagcacggc aga 23

 <210> 443
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 443
 tctagccagc ttggctccaa ta 22

 <210> 444
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 444
 cctggctcta gcaccaactc ata 23

 <210> 445
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 445
 tcagtggccc taaggagatg ggcct 25

<210> 446
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 446
 caggatacag tgggaatctt gaga 24

 <210> 447
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 447
 octgaagggc ttggagctta gt 22

 <210> 448
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 448
 tctttggcca tttcccatgg ctca 24

 <210> 449
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 449
 cccatggcga ggaggaat 18

 <210> 450
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 450
 tgcgtacgtg tgccttcag 19

 <210> 451
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 451
 cagcacccca ggcagtctgt gtgt 24

 <210> 452
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 452
 aacgtgctac acgaccagtg tact 24

 <210> 453
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 453
 cacagcatat tcagatgact aaatcca 27

 <210> 454
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 454
 ttgtttagtt ctocaccgtg tctccacaga a 31

 <210> 455
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 455
 tgtcagaatg caacotggct t 21

 <210> 456
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 456
 tgatgtgcct ggctcagaac 20

 <210> 457
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 457
 tgcacccataga tgccccccagc accc 24

 <210> 458
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 458
 aagatgcgcc aggtcttcta 20

 <210> 459
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 459
 ctccgtgacg gtctgctcac ttat 24

 <210> 460
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 460
 tggctgtcag tccagtgtgc atgg 24

 <210> 461
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 461
 gcatagggat agataagatc ctgctttat 29

 <210> 462
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 462
 caaatataag taccatcag gagagaa 27

 <210> 463
 <211> 37

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 463
 aagttgctaa atatatacat tatctgcgcc aagtcca 37

 <210> 464
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 464
 gtgctgcca caattcatga 20

 <210> 465
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 465
 gtccctggta tgggtctgaa ttatat 26

 <210> 466
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 466
 actctctgca cccacagtc accactatct c 31

 <210> 467
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 467
 ctgaggaacc agccatgtct ct 22

 <210> 468
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 468
 gaccagatgc aggtacagga tga 23

<210> 469
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 469
 ctgcccttc agtgatgcc accctt 25

 <210> 470
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 470
 gggtaggagc tctactgagta ga 22

 <210> 471
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 471
 caatacaggt aatgaaactc tgcttctt 28

 <210> 472
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 472
 tcctcttaag cataggccat ttctcagtt tagaca 36

 <210> 473
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 473
 ggtggtcttg cttggtctca c 21

 <210> 474
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 474
ccgtcgttca gcaacatgac 20

<210> 475
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 475
accgcctacc gctgtgccca 20

<210> 476
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 476
cagtaaaacc acaggctgga ttt 23

<210> 477
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 477
cctgagagca agaaggtga gaat 24

<210> 478
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 478
tagacaggga ccatggcccg ca 22

<210> 479
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 479
tgggctgtag aagagttgtt g 21

<210> 480
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 480
 tccacacttg gccagtttat 20

 <210> 481
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 481
 cccaacttct cccttttggg ccct 24

 <210> 482
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 482
 gtcccttcac tgtttagagc atga 24

 <210> 483
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 483
 actctccccc tcaacagcct cctgag 26

 <210> 484
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 484
 gtggtcaggg cagatccttt 20

 <210> 485
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 485
 acagatccag gagagactcc aca 23

 <210> 486
 <211> 21

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 486
 agcggcgctc ccagcctgaa t 21

 <210> 487
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 487
 catgattggt cctcagttcc atc 23

 <210> 488
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 488
 atagagggt cccagaagtg 20

 <210> 489
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 489
 cagggccttc agggccttca c 21

 <210> 490
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 490
 gctcagccaa acactgtca 19

 <210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 491
 ggggcctga cagtgtt 17

<210> 492
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 492
ctgagccgag actggagcat ctacac 26

<210> 493
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 493
gtgggcagcg tcttgtc 17

<210> 494
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 494
cccacgcgtc cgcgcagtcg cgcagttctg cctccgcctg ccagtctcgc 50
ccgcgatccc ggcccggggc tgtggcgtcg actccgaccc aggcagccag 100
cagcccgcgc gggagccgga cgcgcgcgg aggagctcgg acggcatgct 150
gagccccctc ctttgotgaa gcccgagtcg ggagaagccc gggcaaacgc 200
aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250
gaggagaagg aggaggagcg gaaccacag aggggcagca aaagaagcgg 300
tggtgggtgg cgctgtggcc atggcggcgg ctatcgccag ctgctcctc 350
cgtcagaaga ggcaagcccg cgcgcgcgag aaatccaacg cctgcaagtg 400
tgtcagcagc ccagcaaaag gcaagaaccg ctgcgacaaa acaagttaa 450
atgtcttttc ccgggtcaaa ctcttcgggt ccaagaagag gcgcagaaga 500
agaccagagc ctacagcttaa gggtatagtt accaagctat acagccgaca 550
aggctaccac ttgcagctgc aggcggatgg aaccattgat ggcaccaaag 600
atgaggacag cacttacact ctgtttaacc tcatccctgt ggtctcgca 650
gtggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacg 700
tgagggatac ttgtacacct cggaactttt cacacctgag tgcaaatca 750
aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800
cgtcagcagc agtcaggccg aggggtgtat ctgggtctga acaagaaggg 850
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900

ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
 gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
 aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
 caacgtagcc agtgaggga aaagaagggc tctgtaacag aaccttacct 1100
 ccaggtgctg ttgaattctt ctgacagtcc ttcacccaaa agttcaaat 1150
 tgtcagtgac atttaccaaa caaacaggca gagttcacta ttctatctgc 1200
 cattagacct tcttatcatc cataactaaag c 1231

<210> 495
 <211> 245
 <212> PRT
 <213> Homo Sapien

<400> 495
 Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln
 1 5 10 15
 Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser
 20 25 30
 Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
 35 40 45
 Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
 50 55 60
 Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
 65 70 75
 Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
 80 85 90
 Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
 95 100 105
 Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
 110 115 120
 Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
 125 130 135
 Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
 140 145 150
 Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser
 155 160 165
 Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
 170 175 180
 Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
 185 190 195
 Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
 200 205 210
 Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

05650301

05650301

gcctggacaa ggagggccag gtcataagag gaaaccagag taagaagacc 1300
aaggcagctg cccactttct gccaagctc ctggagggtg ccatgtacca 1350
ggagccttct ctccacagtg tccccgaggc ctccccttcc agtccccctg 1400
ccccctgaaa tgtagtccct ggactggagg ttcctgcac tcccagtgag 1450
ccagccacca ccacaacctg t 1471

<210> 497
<211> 225
<212> PRT
<213> Homo Sapien

<400> 497
Met Ala Ala Leu Ala Ser Ser Leu Ile Arg Gln Lys Arg Glu Val
1 5 10 15
Arg Glu Pro Gly Gly Ser Arg Pro Val Ser Ala Gln Arg Arg Val
20 25 30
Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile
35 40 45
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro
50 55 60
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu
65 70 75
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser
80 85 90
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys
110 115 120
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser
125 130 135
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe
140 145 150
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg
155 160 165
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln
170 175 180
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His
185 190 195
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
200 205 210
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro
215 220 225

<210> 498
<211> 744

<212> DNA
<213> Homo Sapien

<400> 498
atggccgcgg ccatcgctag cggcttgatc cgccagaagc ggcaggcgcg 50
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100
gcaagaaccg cgggctctgc aacggcaacc tgggtgatat cttctccaaa 150
gtgcgcattc tcggcctcaa gaagcgagg ttgcggcgcc aagatcccca 200
gctcaagggt atagtaccca ggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctcgatggaa ccaaggatga cagcactaat 300
ttctactctc tcaacctcat accagtggga ctacgtgttg ttgccatcca 350
gggagtgtaaa acagggttgt atatagccat gaatggagaa ggttacctct 400
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaatac ctcattccatg ttgtacagac aacaggaaac 500
tggtagagcc tggtttttgg gattaaataa ggaaggcgaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600
ttggaagttg ccatgtaccg agaaccatct ttgcatgatg ttggggaaac 650
ggtcccgaag cctggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700
taatgaatgg aggcacacaa gtcaacaaga gtaagacaac atag 744

<210> 499
<211> 247
<212> PRT
<213> Homo Sapien

<400> 499
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln
1 5 10 15
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg
20 25 30
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val
35 40 45
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
50 55 60
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu
65 70 75
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
80 85 90
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys
110 115 120

Thr Gly Leu Tyr	Ile Ala Met Asn Gly	Glu Gly Tyr Leu Tyr	Pro
125		130	135
Ser Glu Leu Phe	Thr Pro Glu Cys Lys	Phe Lys Glu Ser Val	Phe
140		145	150
Glu Asn Tyr Tyr	Val Ile Tyr Ser Ser	Met Leu Tyr Arg Gln	Gln
155		160	165
Glu Ser Gly Arg	Ala Trp Phe Leu Gly	Leu Asn Lys Glu Gly	Gln
170		175	180
Ala Met Lys Gly	Asn Arg Val Lys Lys	Thr Lys Pro Ala Ala	His
185		190	195
Phe Leu Pro Lys	Pro Leu Glu Val Ala	Met Tyr Arg Glu Pro	Ser
200		205	210
Leu His Asp Val	Gly Glu Thr Val Pro	Lys Pro Gly Val Thr	Pro
215		220	225
Ser Lys Ser Thr	Ser Ala Ser Ala Ile	Met Asn Gly Gly Lys	Pro
230		235	240
Val Asn Lys Ser	Lys Thr Thr		
245			

<210> 500
 <211> 2906
 <212> DNA
 <213> Homo Sapien

<400> 500
 ggggagagga attgaccatg taaaaggaga cttttttttt tgggtggtggt 50
 ggctgttggg tgccttgcaa aaatgaagga tgcaggacgc agctttctcc 100
 tggaaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacaggagg cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtgtt ctgacataaa taaataatct taaagcagct gttccctcc 300
 ccaccccaa aaaaaaggat gattggaaat gaagaaccga ggattcacia 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggcct ttttagtaaa gtaagaact 450
 ggtgtggtgg tgttttcctt tctttttgaa tttccacaa gaggagagga 500
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttaccgcg 550
 gcagattgag gcattgattg ggggagagaa accagcagag cacagtggga 600
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650
 ttcacaaacc tccttttttt taaattttta ttccttttgg tatcaagatc 700
 atgcgttttc tcttgttctt aaccacctgg atttccatct ggaatgtgct 750

gtgatcagtc tgaatacaaa ctgtttgaat tccagaagga ccaacaccag 800
 ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850
 ataggtccta ggtttaacag ggccctatgt gacccctgct ttgtggtgct 900
 gctggtctct caacttcttg tgggtgcttg tctggtgctg gctcagacct 950
 gcccttctgt gtgctctctg agcaaccagt tcagcaaggt gatttgtgtt 1000
 cggaaaaaac tgcgtgaggt tccggtggc atctccacca acacacggct 1050
 gctgaacctc catgagaacc aaatccagat catcaaagtg aacagcttca 1100
 agcacttgag gcacttgaa atcctacagt tgagtaggaa ccatatcaga 1150
 accattgaaa ttggggcttt caatggctct gcgaacctca acactctgga 1200
 actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250
 tgtctaaact gaaggagctc tgggtgcgaa acaaccccat tgaagcctc 1300
 ccttcttatg cttttaacag aattccttct ttgcgccgac tagacttagg 1350
 ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggctgt 1400
 ccaacttgag gtatttgaac cttgccatgt gcaacottcg ggaatccct 1450
 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500
 ttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550
 aactgtggat gatacagtc cagattcaag tgattgaacg gaatgccttt 1600
 gacaaacctc agtcactagt ggagatcaac ctggcacaca ataactaac 1650
 attactgct catgacctct tcaactcctt gcatcatcta gagcggatac 1700
 attacatca caaccttg aactgtaact gtgacatact gtggctcagc 1750
 tgggtggataa aagacatggc cccctcgaac acagcttgtt gtgcccggtg 1800
 taacactcct cccaatctaa aggggaggta cattggagag ctgcagcaga 1850
 attactcac atgctatgct ccggtgattg tggagcccc tgcagacctc 1900
 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950
 cctgacatct gtatcttga ttactccaaa tggaacagtc atgacacatg 2000
 gggcgtaaaa agtcgggata gctgtgctca gtgatggtac gttaaatttc 2050
 acaaatgtaa ctgtgcaaga tacaggcatg tacacatgta tggtagtata 2100
 ttccgttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150
 ccactactcc tttctcttac tttcaacccg tcacagtaga gactatggaa 2200
 ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtccactcc 2250
 agtggcgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300
 gcacaagtc gacagagaaa accttcacca tccagtgac tgatataaac 2350

agtgggatcc caggaattga tgaggtcatg aagactacca aaatcatcat 2400
 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggctattt 2450
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgccccaaca 2500
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaaaag cacctgcccc tgctgtctat cgagcatgag cacctaaatc 2600
 actataactc atacaaatct ccttcaacc acacaacaac agttaacaca 2650
 ataaattcaa tacacagttc agtgcataa ccgattattg tccgaatgaa 2700
 ctctaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750
 caaaaaacaa acaatcaaaa aaaaagacag ttattataaaa atgacacaaa 2800
 tgactgggct aaatctactg ttcaaaaaa gtgtctttac aaaaaaaca 2850
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900
 caaaaa 2906

<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
 Met Leu Asn Lys Met Thr Leu His Pro Gln Gln Ile Met Ile Gly
 1 5 10 15
 Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu
 20 25 30
 Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln
 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	170	175	180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	185	190	195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	200	205	210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	215	220	225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	230	235	240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	245	250	255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	275	280	285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	290	295	300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	305	310	315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	320	325	330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	335	340	345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	350	355	360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	365	370	375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	380	385	390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	395	400	405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	410	415	420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro
				485					490					495
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr
				500					505					510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr
				515					520					525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala
				530					535					540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His
				545					550					555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn
				560					565					570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu
				575					580					585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser
				590					595					600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn
				605					610					615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn
				620					625					630
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile					
				635					640					

<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

```

<400> 502
gcgccgggag cccatctgcc ccacaggggca cggggcgcg ggcgggtcc 50
cgccccggcac atggctgcag ccacctgcg cgcaccccg ggcgccgcgc 100
ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150
agcaactgag cggggaagcg ccgcggtccg gggatcgga tgtccctcct 200
ccttctctct ttgctagttt cctactatgt tggaaccttg gggactcaca 250
ctgagatcaa gagagtggca gaggaaaag tcactttgcc ctgccaccat 300
caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350
cgataatgaa gggaacaaaa aagtgggtgat cacttactcc agtcgtcatg 400
tctacaataa cttgactgag gaacagaag gccgagtggc ctttgcttcc 450
aatttcctgg caggagatgc ctcccttcag attgaacctc tgaagcccag 500
tgatgagggc cggtagacct gtaagggtta gaattcaggg cgctacgtgt 550
ggagccatgt catcttaaaa gtcttagtga gaccatccaa gcccaagtgt 600
  
```

gagttggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650
 gtcatcctct ggacagagc ccattgtgtgta ttactggcag cgaatccgag 700
 agaaagaggg agaggatgaa cgtctgcctc ccaaactctag gattgactac 750
 aaccaccctg gacgagtctt gctgcagaat cttaccatgt cctactctgg 800
 actgtaccag tgcacagcag gcaacgaagc tgggaagaa agctgtgtgg 850
 tgcgagtaac tgtacagtat gtacaaagca toggcatggt tgcaggagca 900
 gtgacaggca tagtggctgg agccctgctg atttctctct tgggtgtggct 950
 gctaaccga aggaagaca aagaagata tgaggaagaa gagagacct 1000
 atgaaattcg agaagatgct gaagctccaa aagcccgctt tgtgaaaccc 1050
 agctcctctt cctcaggctc toggagctca cgctctggtt cttcctccac 1100
 togtccaca gcaaatagtg cctcacgcag ccagcggaca ctgtcaactg 1150
 acgcagcacc ccagccaggg ctggccaccc aggcatacag cctagtgggg 1200
 ccagaggtag gaggttctga accaaagaaa gtccaccatg ctaatctgac 1250
 caaagcagaa accacaccca gcatgatccc cagccagagc agagccttcc 1300
 aaacggtctg aattacaatg gacttgactc ccacgcttcc ctaggagtca 1350
 ggggtcttgg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400
 ccagatgaga ggatcatctaa gtagcagtga gcattgcacg gaacagattc 1450
 agatgagcat ttctcttata caataccaaa caagcaaaag gatgtaagct 1500
 gattcatctg taaaaaggca tcttattgtg ccttagacc agagtaaggg 1550
 aaagcaggag tccaaatcta ttgttgacc aggacctgtg gtgagaaggt 1600
 tggggaaagg tgaggtgaat atacctaaa cttttaatgt gggatatatt 1650
 gtatcagtgc ttgattcac aattttcaag aggaatggg atgctgtttg 1700
 taaattttct atgcatttct gcaaaactat tggattatta gttattcaga 1750
 cagtcaagca gaacccacag cttattaca cctgtctaca ccatgtactg 1800
 agctaaccac ttctaagaaa ctccaaaaa ggaacatgt gtcttctatt 1850
 ctgacttaac ttcatattgc ataaggtttg gatattaatt tcaaggggag 1900
 ttgaaatagt gggagatgga gaagagtga tgagtttctc cactctata 1950
 ctaatctcac tattgttatt gagccaaaa taactatgaa aggagacaaa 2000
 aatttgtgac aaaggattgt gaagagcttt ccatcttcat gatgttatga 2050
 ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100
 cctcaaatca gatgcctcta aggactttcc tgctagatat tctggaagg 2150
 agaaaataca acatgtcatt tatcaacgtc cttagaaaga attctctag 2200

agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250
 tctcttcttt ctgagaaaaa gtgaaaccag aattgcaaga ctgggtggac 2300
 tagaaagga gattagatca gttttctott aatagtcaa ggaaggtagc 2350
 cgggcatggt gccaggcacc ttaggaaaaa tcacgaggt ggaggttgca 2400
 gtgagccgag attatgccat tgcaactccag cctgggtgac agagcgggac 2450
 tccgtctc 2458

<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503
 Met Ser Leu Leu Leu Leu Leu Leu Val Ser Tyr Tyr Val Gly
 1 5 10 15
 Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys
 20 25 30
 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
 35 40 45
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
 50 55 60
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
 65 70 75
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
 80 85 90
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
 95 100 105
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
 110 115 120
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
 125 130 135
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
 140 145 150
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
 155 160 165
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro
 170 175 180
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu
 185 190 195
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala
 200 205 210
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val
 215 220 225

Gln Tyr Val Gln	Ser Ile Gly Met Val	Ala Gly Ala Val Thr Gly
230		235 240
Ile Val Ala Gly	Ala Leu Leu Ile Phe	Leu Leu Val Trp Leu Leu
245		250 255
Ile Arg Arg Lys	Asp Lys Glu Arg Tyr	Glu Glu Glu Glu Arg Pro
260		265 270
Asn Glu Ile Arg	Glu Asp Ala Glu Ala	Pro Lys Ala Arg Leu Val
275		280 285
Lys Pro Ser Ser	Ser Ser Ser Gly Ser	Arg Ser Ser Arg Ser Gly
290		295 300
Ser Ser Ser Thr	Arg Ser Thr Ala Asn	Ser Ala Ser Arg Ser Gln
305		310 315
Arg Thr Leu Ser	Thr Asp Ala Ala Pro	Gln Pro Gly Leu Ala Thr
320		325 330
Gln Ala Tyr Ser	Leu Val Gly Pro Glu	Val Arg Gly Ser Glu Pro
335		340 345
Lys Lys Val His	His Ala Asn Leu Thr	Lys Ala Glu Thr Thr Pro
350		355 360
Ser Met Ile Pro	Ser Gln Ser Arg Ala	Phe Gln Thr Val
365		370

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
 cgcgaggcgc ggggagcctg ggaccaggag cgagagccgc ctacctgcag 50
 ccgcgcgccca cggcacggca gccaccatgg cgctcctgct gtgcttcgtg 100
 ctccctgtgcg gactagtggg ttccgccaga agtttgagta tcaactactcc 150
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aattttacgct tagtcccgaa gaccagggac cgctggacat cgagtggctg 250
 atatcaccag ctgataatca gaaggtggat caagtgatta ttttatattc 300
 tggagacaaa atttatgatg actactatcc agatctgaaa ggccgagtac 350
 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400
 aattttacaac tgtcagatat tggcacatat cagtgcaaag tgaaaaaagc 450
 tcctggtggtt gcaataaaga agattcatct ggtagttctt gttaagcctt 500
 caggtgagag atgttacgtt gatggatctg aagaaattgg aagtgaactt 550
 aagataaaat gtgaacaaa agaaggttca cttccattac agtatgagt 600
 gcaaaaattg tctgactcac agaaaatgcc cacttcattg ttagcagaaa 650
 tgacttcatc tgttatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggcctctgac agtgcctgtt 750
 gcgtctaacc gttgtccctc cttcaataaa agctggacta attgcaggag 800
 ccattatagg aactttgtct gctctagcgc tcattggtct tatcatcttt 850
 tgctgtcgtg aaaagcgtag agaagaaaaa tatgaaaagg aagtccatca 900
 cgatctcagg gaagatgtgc caccctccaa gagccgtacg tccactgcca 950
 gaagctacat cggcagtaat cattcatccc tgggggtccat gtctccttcc 1000
 aacatggaag gatattccaa gactcagtat aaccaagtag caagtgaaga 1050
 ctttgaacgc actcctcaga gtccgactct ccacactgct aagtccaagt 1100
 acccttcaaa gactgatgga attacagttg tataaatatg gactactgaa 1150
 gaatctgaag tattgtatta tttgacttta ttttaggcct ctagttaaga 1200
 cttaatgttt ttttaaaaaa agcacaaggc acagagatta ggcagctgt 1250
 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300
 atgtcaaaat tagtacgagc caaattcttt gttaaaaaac cctatgtata 1350
 gtgacactga tagttaaagg atgttttatt atattttcaa taactaccac 1400
 taacaaattt ttaacttttc atatgcatac tctgatattg ggtccttttag 1450
 gaaaagtatg gttaatagtt gatttttcaa aggaatttt aaaattctta 1500
 cgttctgttt aatgtttttg ctatttagtt aaatacattg aagggaaata 1550
 cccgttcttt tcccttttta tgcacacaa agaaacacgc gttgtcatgc 1600
 ctcaaacatc tttttatttg caactacatg atttcacaca attctcttaa 1650
 acaacgacat aaaatagatt tccttgtata taaataactt acatacgtc 1700
 cataaagtaa attctcaaag gtgctagaac aaatcgtcca cttctacagt 1750
 gttctcgtat ccaacagagt tgatgcacaa tatataaata ctcaagtcca 1800
 atattaaaaa cttaggcact tgactaaact taataaaatt tctcaaaata 1850
 tatcaatcct taaagtgcct atatttttta agaaagatta tctcacaata 1900
 cttctataaa aataagtttg atggttttgg ccatctaact tcactactat 1950
 tagtaagaac ttttaacttt taatgtgtag taaggtttat tctacctttt 2000
 tctcaacatg acaccaacac aatcaaaaac gaagttagtg aggtgctaac 2050
 atgtgaggat taatccagtg attccggtca caatgcattc caggaggagg 2100
 taccocatgc actggaattg ggcgatatgg tttatttttt ctccctgat 2150
 ttggataacc aaatggaaca ggaggaggat agtgattctg atggccattc 2200
 cctcgatata ttccctggct tttctgggc aaagggtgcc acattggaag 2250
 agtggaagaat ataagttctg aaatctgtag ggaagagaac acattaagtt 2300

aattcaaaagg aaaaaatcat catctatgtt ccagatttct cattaaagac 2350
aaagttaccc acaacactga gatcacatct aagtgaact cctattgtca 2400
ggctcaataa cattaataac ctcatgtgta ataggcgtat aatgtataac 2450
aggtgaccaa tgttttctga atgcataaag aaatgaataa actcaaacac 2500
agtacttctt aaacaacttc aaccataaaa gaccataaca tggacgaat 2550
ggaagcttgt aaggacatgc ttgttttagt ccagtgggtt ccacagctgg 2600
ctaagccagg agtcacttgg aggttttaa atacataaca ttggagctgg 2650
agggcattat ccttagcaaa ctaatgcaga aacagaaaat caactaccgc 2700
atgttctcac ttataagtg gaggaatga taagaactta tgaacacaaa 2750
gaaggaaaca atagacattg gagtctattt gagaggggag ggtgggagaa 2800
ggaaaaggag cagaaaagat aactattgag tactgccttc acacctgggt 2850
gatgaataa tatgtacaac aaatccctgt gacacatgtt tacctatgga 2900
acaaaccttc atgtgtatcc ctaaacctaa aataaaagtt aaaaaaaaaa 2950
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3000
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3050
aaaaaaaaa 3060

<210> 505
<211> 352
<212> PRT
<213> Homo Sapien

<400> 505
Met Ala Leu Leu Cys Phe Val Leu Leu Cys Gly Val Val Asp
1 5 10 15
Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu
20 25 30
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
35 40 45
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
50 55 60
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
65 70 75
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
80 85 90
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
95 100 105
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
110 115 120
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

	125		130		135
Val Val Leu Val	Lys Pro Ser Gly Ala Arg Cys Tyr Val Asp Gly				
	140		145		150
Ser Glu Glu Ile	Gly Ser Asp Phe Lys Ile Lys Cys Glu Pro Lys				
	155		160		165
Glu Gly Ser Leu	Pro Leu Gln Tyr Glu Trp Gln Lys Leu Ser Asp				
	170		175		180
Ser Gln Lys Met	Pro Thr Ser Trp Leu Ala Glu Met Thr Ser Ser				
	185		190		195
Val Ile Ser Val	Lys Asn Ala Ser Ser Glu Tyr Ser Gly Thr Tyr				
	200		205		210
Ser Cys Thr Val	Arg Asn Arg Val Gly Ser Asp Gln Cys Leu Leu				
	215		220		225
Arg Leu Asn Val	Val Pro Pro Ser Asn Lys Ala Gly Leu Ile Ala				
	230		235		240
Gly Ala Ile Ile	Gly Thr Leu Leu Ala Leu Ala Leu Ile Gly Leu				
	245		250		255
Ile Ile Phe Cys	Cys Arg Lys Lys Arg Arg Glu Glu Lys Tyr Glu				
	260		265		270
Lys Glu Val His	His Asp Ile Arg Glu Asp Val Pro Pro Pro Lys				
	275		280		285
Ser Arg Thr Ser	Thr Ala Arg Ser Tyr Ile Gly Ser Asn His Ser				
	290		295		300
Ser Leu Gly Ser	Met Ser Pro Ser Asn Met Glu Gly Tyr Ser Lys				
	305		310		315
Thr Gln Tyr Asn	Gln Val Pro Ser Glu Asp Phe Glu Arg Thr Pro				
	320		325		330
Gln Ser Pro Thr	Leu Pro Pro Ala Lys Phe Lys Tyr Pro Tyr Lys				
	335		340		345
Thr Asp Gly Ile	Thr Val Val				
	350				

<210> 506
 <211> 1705
 <212> DNA
 <213> Homo Sapien

<400> 506
 tgaatgact tccacggctg ggacgggaac cttccacca cagctatgcc 50
 tctgattggt gaatgggtgaa ggtgcctgtc taacttttct gtaaaaagaa 100
 ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150
 ggacaagaca tgactgtgat gaggagctgc tttcgccaat ttaacaccaa 200
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

agatgaattt tcaacagagg ctgcaaagcc tgtggacttt agccagaccc 300
 ttctgccctc ctttgctggc gacagcctct caaatgcaga tggttgtgt 350
 cccttgctg ggttttacc tgcttctctg gagccaggta tcaggggccc 400
 agggccaaga attccacttt gggccctgcc aagtgaagg ggttgttccc 450
 cagaaactgt ggaagcctt ctgggctgtg aaagacacta tgcaagctca 500
 ggataacatc acgagtgcc ggctgctgca gcaggaggtt ctgcagaacg 550
 tctcggtatc tgagagctgt tacctgttcc acacctgtct ggagtcttac 600
 ttgaaaactg ttttcaaaaa ccaccacaat agaacagttg aagtcaggac 650
 tctgaagtca ttctctactc tggccaacaa ctttgtttct atcgtgtcac 700
 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtgc 750
 cacaggcggt ttctgctatt ccggagagca ttcaaacagt tggacgtaga 800
 agcagctctg accaaagccc ttggggaagt ggacattctt ctgacctgga 850
 tgcagaaatt ctacaagctc tgaatgtcta gaccaggacc tcctccccc 900
 tggcactggt ttgttccctg tgtcatttca aacagtctcc ctctctatgc 950
 tgttactggt acaacttcag cccttggtcca tgggtcccat tcttggtcca 1000
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050
 gaagtgccct ctggatgctg tgaagagtct acagagaaga ttcttgtatt 1100
 tattacaact ctatttaatt aatgtcagta ttcaactga agttctattt 1150
 atttgtgaga ctgtaagtta catgaaggca gcagaatatt gtgccccatg 1200
 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250
 cttagtaagt acttaataaa ctgtggtgct ttttttgccc tgtctttgga 1300
 ttgttaaaaa acagagaggg atgcttggtt gtaaaactga acttcagagc 1350
 atgaaaaatc cactgtcttc tgatatctgc agggacagag cattgggggtg 1400
 ggggtaagggt gcattctgtt gaaaagtaaa cgataaaatg tggattaaag 1450
 tgcccagcac aaagcagatc ctcaataaac atttcatttc ccaccacac 1500
 tcgccagctc accccatcat ccctttccct tgggtgcctc cttttttttt 1550
 tatcctagtc attcttccct aatcttccac ttgagtgtca agctgacctt 1600
 gctgatgggt acattgcacc tggatgtact atccaatctg tgatgacatt 1650
 ccctgctaataaaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700
 aaaa 1705

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg
1				5					10					15
Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met
			20						25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Trp	Ser	Gln	
			35						40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
			50						55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
			65						70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
			80						85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
			95						100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
			110						115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
			125						130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
			140						145					150
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
			155						160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
			170						175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
			185						190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
			200						205					

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

aaggagcagc cgcgaagcac caagtgcagc gcataaagtt acagtgtgtt 50
tccctttggc tctgggtac aatactgata ttgtgctcag tagacaacca 100
cgggtctcagg agatgtctga ttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac ctcccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgctgc gtgaccaaga acctcctggc gttctactgt gacagggtgt 300

tcaagatca tcaggagcca aacccccaaa tcttgagaaa aatcagcagc 350
 attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
 acagaggcag tgtcactgca ggcaggagc caccaatgcc accagatga 450
 tccatgacaa ctatgatcag ctggaggtcc acgtgctgc cattaatcc 500
 ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
 aatgttctca gcttgatgac aaggaacctg tatagtgtac cagggatgaa 600
 cccccctgt gcgttttact gtgggagaca gccaccttg aaggggaagg 650
 agatggggaa ggccccctgc agctgaaagt cccactggct ggcctcaggc 700
 tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750
 taaactctat ctgctgaaag ggcctgcagg ccatcctggg agtaaagggc 800
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
 tgagccaagt gatatcctgt agtacacatt gtactgagtg gttttctga 900
 ataaattcca tattttacct atga 924

<210> 509
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 509
 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu
 1 5 10 15
 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
 35 40 45
 Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
 50 55 60
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
 65 70 75
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
 80 85 90
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
 95 100 105
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
 110 115 120
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
 125 130 135
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
 140 145 150
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
cccgtgccaa gaggtagcga agtaccgcct atagagtcta taggcccact 50
tggtctcggt agaagcgggc tacaattaat acataacctt atgtatcata 100
cacatacgat ttaggtgaca ctatagaata acatccactt tgcctttctc 150
tccacagggt tccactccca ggtccaactg cacctcggtt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttgggg gcccgcccta 250
ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgctcctcaga 300
gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccttg 450
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
atttcgaccc ggagaactgc aggttccaac accagacgct ggaaaacggg 600
tacgacgtct accactctcc tcagtatcac ttcttggtca gtctgggccc 650
ggcgaagaga gccttctgc caggcatgaa cccacccccc tactcccagt 700
tcctgtcccc gaggaacgag atccccctaa ttcacttcaa ccccccata 750
ccacggcggc acacccggag cggcaggac gactcggagc gggaccccct 800
gaacgtgctg aagccccggg cccggatgac cccggccccg gcctcctgtt 850
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaacca 900
ttaggggtgg tcagggcgcg tcgagtgaac acgcacgctg ggggaacggg 950
cccgaaggc tgccgcccct tcgccaagtt catctagggt cgtctgg 996

<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
1 5 10 15
Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	35	40	45
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	50	55	60
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	65	70	75
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	80	85	90
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	95	100	105
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	110	115	120
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	125	130	135
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	140	145	150
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	155	160	165
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	170	175	180
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	185	190	195
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	200	205	210
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	215	220	225
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	230	235	240
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					245	250	

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

<400> 512
 ggaaaaggta cccgcgagag acagccagca gttctgtgga gcagcgggtg 50
 cgggctagga tgggctgtct ctgggggtctg gctctgcccc ttttcttctt 100
 ctgctggggag gttgggggtct ctggggagctc tgcaggcccc agcaccgcga 150
 gagcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctagaccggg gccacggcgc tctggaaact caaacgtga gcgctgagac 250
 ctcttctagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag ttccacaaaa 350
 acatctccca acttcatggt gctgatcgcc acctccgttg agacatcagc 400
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
 caggcagtga tcccagagaa gccatctttg acaccctttg caccgatgac 500
 agctctgaag aggcaaagac actcacaatg gacatattga cattggctca 550
 caoctccaca gaagctaagg gcctgtcttc agagagcagt gcctcttcog 600
 acggccccc tccagtcate acccgtcac gggcctcaga gacagcgcc 650
 tcttccgacg gccccatcc agtcacacc cgtcacggg cctcagagag 700
 cagcgctct tccgacggcc cccatccagt catcaccccg tcatggtccc 750
 cgggatctga tgtcactctc ctgctgaag cctggtgac tgtcacaaa 800
 atcgaggtta ttaattgcag catcacagaa atagaaacaa caacttccag 850
 catccctggg gcctcagaca tagatctcat cccacggaa ggggtgaagg 900
 cctcgtccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
 ccacacatca ctgaggtcac agcctctgac gagaccctgt ccacagccgg 1000
 caccacagag tcagctgcac ctcatgccac ggttgggacc ccactcccca 1050
 ctaacagcgc cacagaaaga gaagtgcag caccgggggc cagaccctc 1100
 agtggagctc tggtcacagt tagcaggaat cccctggaag aaacctcagc 1150
 cctctctgtt gagacacaa gttacgtcaa agtctcagga gcagctccgg 1200
 tctccataga ggctgggtca gcagtggga aaacaacttc ctttgetggg 1250
 agctctgett cctctacag cccctcgga gccgccctca agaactcac 1300
 ccttcagag acacagacca tggacatgc aaccaaggg ccttcccca 1350
 ccagcagggc ccctcttct tctgtccctc cgactacaac caacagcagc 1400
 cgagggacga acagcacctt agccaagatc acaacctcag cgaagaccac 1450
 gatgaagccc caacagccac gccacgact gcccggaaga ggcgaccac 1500
 agacgtgagt gcaggtgaaa atggagggtt cctcctctcg cggtcagtg 1550
 tggcttcccc ggaagacctc actgaccca gagtggcaga aaggctgatg 1600
 cagcagctcc accgggaact ccacgccac gcgcctcact tccaggtctc 1650
 cttactcggt gtcaggagag gctaacggac atcagctgca gccaggcatg 1700
 tcccgatgac caaaagaggg tgctgcccct agcctgggac cccaccgaca 1750
 gactgcagct gcgttactgt gctgagaggt acccagaagg ttcccatgaa 1800
 gggcagcatg tccaagcccc taacccaga tgtggcaaca ggaccctgc 1850
 tcacatccac cggagtgtat gtatggggag gggcttcacc tgttccaga 1900

gggtgctcttg gactcacctt ggcacatgtt ctgtgtttca gtaaagagag 1950
 acctgatcac ccactgtgtt gcttccatcc tgcattaaaaa ttcactcagt 2000
 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
 Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys
 1 5 10 15
 Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
 20 25 30
 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr Glu Ile Glu	Thr Thr Thr Ser Ser	Ile Pro Gly Ala Ser Asp
260		265 270
Ile Asp Leu Ile	Pro Thr Glu Gly Val	Lys Ala Ser Ser Thr Ser
275		280 285
Asp Pro Pro Ala	Leu Pro Asp Ser Thr	Glu Ala Lys Pro His Ile
290		295 300
Thr Glu Val Thr	Ala Ser Ala Glu Thr	Leu Ser Thr Ala Gly Thr
305		310 315
Thr Glu Ser Ala	Ala Pro His Ala Thr	Val Gly Thr Pro Leu Pro
320		325 330
Thr Asn Ser Ala	Thr Glu Arg Glu Val	Thr Ala Pro Gly Ala Thr
335		340 345
Thr Leu Ser Gly	Ala Leu Val Thr Val	Ser Arg Asn Pro Leu Glu
350		355 360
Glu Thr Ser Ala	Leu Ser Val Glu Thr	Pro Ser Tyr Val Lys Val
365		370 375
Ser Gly Ala Ala	Pro Val Ser Ile Glu	Ala Gly Ser Ala Val Gly
380		385 390
Lys Thr Thr Ser	Phe Ala Gly Ser Ser	Ala Ser Ser Tyr Ser Pro
395		400 405
Ser Glu Ala Ala	Leu Lys Asn Phe Thr	Pro Ser Glu Thr Pro Thr
410		415 420
Met Asp Ile Ala	Thr Lys Gly Pro Phe	Pro Thr Ser Arg Asp Pro
425		430 435
Leu Pro Ser Val	Pro Pro Thr Thr Thr	Asn Ser Ser Arg Gly Thr
440		445 450
Asn Ser Thr Leu	Ala Lys Ile Thr Thr	Ser Ala Lys Thr Thr Met
455		460 465
Lys Pro Gln Gln	Pro Arg Pro Arg Leu	Pro Gly Arg Gly Arg Pro
470		475 480
Gln Thr		

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

<400> 514
 gcggagcatc cgctgcggtc ctgcgccgaga ccccgcgcg gattcgccgg 50
 tccttcccgc gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100
 ggcgcggggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150
 cttcttaaaag caaactaaga ccagaggagg gattatcctt gacctttgaa 200
 gacaaaaact aaactgaaat ttaaaatggtt cttcggggga gaaggagct 250

tgacttacac tttgtaata atttgcttcc tgacactaag gctgtctgct 300
 agtcagaatt gcctcaaaaa gagctctagaa gatgttgta ttagacatcca 350
 gtcattctctt tctaaggga ttagaggcaa tgagcccgta tatacttcaa 400
 ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450
 gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
 acccaactgc tacctatttt tctgtcccaa cgagggaagcc tgtccattga 550
 aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
 ttgaccagaa atttgccaag ccaagagtta ccccggaag attctctctt 650
 acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
 attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750
 ttggatcct cagatcacct ggagaaacta ttttaagatgg atgaagcaag 800
 tgccagctc cttgcttata agggaaaagg ccattctcag agttcacata 850
 tttctctga tcaagaaata gctcatctgc tgcctgaaaa tgtgagtgcg 900
 ctccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
 aaagcccgcc acccttctac ccaccaatgc ttcagtgaac cctctctggg 1000
 ctccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050
 tctcagctc ccacgacct cattttaca gtttttacac gggctgcggc 1100
 tacactccaa gcaatggcta caacagcagt totgactacc acctttcagg 1150
 cacctacgga ctgaaaggc agcttagaaa ccataccgtt tacagaaatc 1200
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcaatttc 1250
 tatgtcaaat gtggagtctt ccactatgaa taaaactgct tcttggaag 1300
 gtaggggaggc cagtcaggcc agttctctcc agggcagtggt tccagaaaa 1350
 cagtaaggcc ttccatttga aaaatggctt cttatcggtt cctgtctctt 1400
 tgggtgctgt ttctgggtga taggcctcgt cctctcggtt agaactctt 1450
 cggaatcact ccgaggaaa cgttactcaa gactggatta tttgatcaat 1500
 gggatctatg tggacatcta aggatggaac tcggtgtctc ttaattcatt 1550
 tagtaaccag aagcccaaat gcaatgagtt tctgctgact tgcagtctt 1600
 agcaggaggt tgatatttga agacaggaaa atgccccctt ctgctttcct 1650
 tttttttttt ggagacagag tcttgctctg ttgccaggc tgagtgacag 1700
 tagcacgac tcggctctca ccgcaacctc cgtctcctgg gttcaaggca 1750
 ttctctgccc tcagcctcct aagtatctgg gattacaggc atgtgccacc 1800
 acacctgggt gatatttga tttttagtag agacggggtt tcaccatggt 1850

ggctcaggctg gtctcaaaact cctgacctag tgatccaccc tcctcggcct 1900
 cccaaagtgc tgggattaca ggcattgagcc accacagctg gcccccctct 1950
 gttttatggt tgggttttga gaaggaatga agtgggaacc aaattaggta 2000
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050
 aaagtaataa agtataattg ccatataaat ttcaaaatcc aactggcctt 2100
 tatgcaaaga aacaggttag gacatctagg ttccaattca ttcacattct 2150
 tggttccaga taaaatcaac tgtttatctc aatttctaag ggatttgctt 2200
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

Met	Phe	Phe	Gly	Gly	Glu	Gly	Ser	Leu	Thr	Tyr	Thr	Leu	Val	Ile
1				5					10					15
Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170					175					180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185					190					195

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	200	205	210
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	215	220	225
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	230	235	240
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	245	250	255
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	260	265	270
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	275	280	285
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	290	295	300
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	305	310	315
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	320	325	330
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	335	340	345
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	350	355	360
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	365	370	375
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	380	385	390
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	395	400	405
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	410	415	420
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					425	430	

<210> 516
 <211> 2749
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 1869, 1887
 <223> unknown base

<400> 516
 ctcccacggt gtccagcgcc cagaatgcgg cttctggtcc tgctatgggg 50
 ttgcctgctg ctcccaggtt atgaagccct ggagggccca gaggaaatca 100

gcgggttcga aggggacact gtgtccctgc agtgcaccta caggggaagag 150
 ctgaggggacc accggaagta ctggtgcagg aaggggtgga tcctctttctc 200
 tcgctgtctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250
 agggcagggt gtccatccgt gacagccgcc aggagctctc gctcattgtg 300
 accctgtgga acctcaccct gcaagacgct ggggagtact ggtgtgggg 350
 cgaaaaacgg ggcgccgatg agtctttact gatctctctg ttctgttttc 400
 caggaccctg ctgtctctcc tccccctctc ccaccttcca gctctgggt 450
 acaacacgcc tgcagcccaa ggcaaaagct cagcaaaccc agccccagg 500
 attgacttct cctgggtctt acccggcagc caccacagcc aagcagggga 550
 agacaggggc tgaggccctt ccattgccag ggacttcccc gtacgggac 600
 gaaaggactt ctacgtacac aggaacctct cctcacccag cgcctctctc 650
 tctgcagggt agctcccgcc ccccatgca gctggactcc acctcagcag 700
 aggacaccag tccagctctc agcagtggca gctctaagcc cagggtgtcc 750
 atcccgatgg tccgcatact ggcccagtc ctggtgctgc tgagccttct 800
 gtcagccgca ggcctgatcg ccttctgcag ccacctgctc ctgttgagaa 850
 aggaagctca acaggccacg gagacacaga ggaacgagaa gttctggctc 900
 tcacgcttga ctgcggagga aaaggaagcc ccttccagg cccctgagg 950
 ggacgtgatc tcgatgcctc cctccacac atctgaggag gagctgggt 1000
 tctcgaagtt tgtctcagc tagggcagga ggcctctctg gccaggccag 1050
 cagtgaagca gtatggctg ctggatcagc accgattccc gaaagcttcc 1100
 caccctagcc tcagagtcca gctgcccgga ctccagggtc ctccccacc 1150
 tccccaggct ctctcttgc atgttccagc ctgacctaga agcgtttgtc 1200
 agccctggag ccagagaggg tggccttgc ctctcgctg gagactggga 1250
 catccctgat aggttcacat cctgggcag agtaccaggc tgcgtaccct 1300
 cagcagggcc agacaaggct cagtggatct ggtctgatt tcaatctgcc 1350
 aggaactcct gggcctcatg ccagtgctg gacctgcct tcctccact 1400
 ccagacccca cctgtcttc cctccctggc gtccctcagac ttagtccac 1450
 ggtctcctgc atcagctggt gatgaagag agcatgctgg ggtgagactg 1500
 ggattctggt ttctcttga accacctgca tccagccctt cagggaagcct 1550
 gtgaaaaacg tgattcctgg cccaccaag acccaccaaa accatctctg 1600
 ggcttggtgc aggactctga attctaaca tgcccagtga ctgtcgact 1650
 tgagtttgag ggccagtggt cctgatgaac gctcacacc cttcagctta 1700

gagtctgcat ttgggctgtg acgtctccac ctgccccaat agatctgctc 1750
 tgtctgcgac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800
 caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850
 acagaagtgg ttgcctttnc catttgcct ccttggncca tgccttcttg 1900
 cctttggaaa aatgatgaa gaaaacctg gctccttcct tgtctggaaa 1950
 gggttacttg cctatgggtt ctgggtgcta gagagaaaag tagaaaacca 2000
 gagtgcacgt aggtgtctaa cacagaggag agtaggaaca gggcggatac 2050
 ctgaagtgta ctccgagtc agccccctgg agaaggggtc ggggggtgtg 2100
 gtaaagtagc acaactacta tttttttct ttttccatta ttattgtttt 2150
 ttaagacaga atctcgtgct gctgccagg ctggagtgca gtggcacgat 2200
 ctgcaaaact cgcctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250
 gagtactgtg gattacaggc acgcaccacc acacctggct aatttttgta 2300
 cttttagtag agatggggtt tcaccatgtt ggccaggctg gtcttgaact 2350
 cctgacctca aatgagcctc ctgcttcagt ctcccaaatt gccgggatta 2400
 caggcatgag ccaactgtgc tggccctatt tcccttaaaa agtgaaatta 2450
 agagtgttc agtatgcaa acttggaaa atggaggaga aaaagaaaag 2500
 gaagaaaaaa atgtcaccca tagtctcacc agagactato attattctgt 2550
 ttgtgtgtac ttccttcacc tcttttctt ttcacataat ttgcgggtgt 2600
 tctttttaca gagcaattat ctgttatata caactttgta tctgcctttt 2650
 tccaccttat cgttccatca ctttattoca gcactctct gtgttttaca 2700
 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 517
 <211> 332
 <212> PRT
 <213> Homo Sapien

<400> 517
 Met Arg Leu Leu Val Leu Leu Trp Gly Cys Leu Leu Leu Pro Gly
 1 5 10 15
 Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly
 20 25 30
 Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp
 35 40 45
 His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
 50 55 60
 Cys Ser Gly Thr Ile Tyr Ala Glu Glu Gly Gln Glu Thr Met
 65 70 75

Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu
 80 85 90
 Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr
 95 100 105
 Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile
 110 115 120
 Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser
 125 130 135
 Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala
 140 145 150
 Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu
 155 160 165
 Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu
 170 175 180
 Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr
 185 190 195
 Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro
 200 205 210
 Ala Gly Ser Ser Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala
 215 220 225
 Glu Asp Thr Ser Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg
 230 235 240
 Val Ser Ile Pro Met Val Arg Ile Leu Ala Pro Val Leu Val Leu
 245 250 255
 Leu Ser Leu Leu Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His
 260 265 270
 Leu Leu Leu Trp Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln
 275 280 285
 Arg Asn Glu Lys Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys
 290 295 300
 Glu Ala Pro Ser Gln Ala Pro Glu Gly Asp Val Ile Ser Met Pro
 305 310 315
 Pro Leu His Thr Ser Glu Glu Glu Leu Gly Phe Ser Lys Phe Val
 320 325 330
 Ser Ala

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

ccctgcagtg cacctacagg gaag 24

<210> 519
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 519
 ctgtcttccc ctgcttggt gtgg 24

<210> 520
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 520
 ggtgcaggaa ggggtgggac ctcttctctc gctgctctgg ccacatc 47

<210> 521
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 521
 ccagtcaca gcaggcaacg aagc 24

<210> 522
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 522
 actaggctgt atgcctgggt gggc 24

<210> 523
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 523
 gtatgtacaa agcatcgga tggttgcagg agcagtgaca ggc 43

<210> 524
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 524
aatctcagca ccagccactc agagca 26

<210> 525
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 525
gttaaagagg gtgcccttcc agcga 25

<210> 526
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 526
tatcccaatg cctcccccact gctc 24

<210> 527
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 527
gatgaacttg gcgaaggggc ggca 24

<210> 528
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 528
agggaggatt atccttgacc ttggaagacc 30

<210> 529
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 529
gaagcaagtg cccagctc 18

<210> 530
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

cggtgccctg ctcttttg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 531

caccgtagct gggagcgcac tcac 24

<210> 532

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 532

agtgtgaagtc aagctccc 18